UNITED STATES
AIR FORCE

OCCUPATIONAL SURVEY REPORT

BIOENVIRONMENTAL ENGINEERING
AFSC 4B0X1

OSSN: 2501

OCTOBER 2002

OCCUPATIONAL ANALYSIS PROGRAM
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Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
00 OCT 2002	**N/A**	**-**

4. TITLE AND SUBTITLE	5a. CONTRACT NUMBER
Occupational Survey Report, Bioenvironmental Engineering, AFSC 4B0X1, OSSN: 2501	5b. GRANT NUMBER
	5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)	5d. PROJECT NUMBER
	5e. TASK NUMBER
	5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Occupational Analysis Program, Air Force Occupational Measurement Sq., Air Education and Training Cmd., 1550 5th Street East, Randolph AFB,X 78150-4449**	8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)	10. SPONSOR/MONITOR'S ACRONYM(S)
	11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES
Also See: ADM001447, The original document contains color images.

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			
unclassified	**unclassified**	**unclassified**	**UU**	**80**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

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PREFACE

This report presents the results of an Air Force Occupational Survey of the Bioenvironmental Engineering career ladder (AFSC 4B0X1). Authority for conducting an occupational survey is contained in AFI 36-2623. Copies of this report and pertinent computer printouts are distributed to the Air Force Career Field Manager, technical training school, all major using commands, and other interested operations and training officials.

Captain Steve Holland, Inventory Development Specialist, developed the survey instrument. Mr. James A. Earles, Occupational Analyst, analyzed the data and wrote the final report. Mrs. Jeanie C. Guesman provided computer-programming support, and Ms. Dolores Navarro provided administrative support. Major Jose Caussade, Chief, Enlisted Analysis Section, reviewed and approved this report for release.

Additional copies of this report may be obtained by writing to AFOMS/OAOD, 1550 5th Street East, Randolph AFB TX 78150-4449, or by calling DSN 487-5543. For information on the Air Force occupational survey process or other on-going projects, visit our website at https://www-r.omsq.af.mil/. (Note: If you experience a Microsoft Word security problem after clicking on the above link, please copy the web address into the address window in your web browser.)

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OCCUPATIONAL SURVEY REPORT (OSR)
BIOENVIRONMENTAL ENGINNERING
(AFSC 4B0X1)

EXECUTIVE SUMMARY

1. Survey Coverage: The Bioenvironmental Engineering career ladder was surveyed to obtain current task, software, and equipment data for use in evaluating current training programs. The data will also be used to support Specialty Knowledge Test (SKT) development. Surveys were sent to 690 Active Duty (AD), 181 Air National Guard (ANG), and 63 Air Force Reserve Command (AFRC) personnel. Survey results were based on 581 members responding (483 AD, 78 ANG, and 20 AFRC).

2. Specialty Jobs: Structure analysis identified one cluster and eight independent jobs within the specialty. This career ladder contains a wide variety of jobs, but the vast majority of the members are performing tasks within the industrial hygiene arena.

3. Career Ladder Progression: The Bioenvironmental Engineering career ladder progression is typical of most career ladders; technical activities decrease and supervisory/management and training activities increase with skill-level progression. Seven-skill-level members spend 25% of their time performing supervisory/management activities; 9-skill levels spend 53% of their time performing supervisory/management activities.

4. Training Analysis: The Specialty Training Standard (STS) was a "strawman" STS created simultaneously with the job task survey early in 2001. This STS was revised at a late June 2002 Utilization and Training Workshop using the survey data. The "strawman" STS, for the most part, was supported by the survey data.

5. Job Satisfaction Analysis: In general, job satisfaction among most 4B0X1 personnel was good. However, members of the Entry-Level Water Analysis Independent Job and the Thermoluminescent Dosimeter Program Independent Job have a combined 20% intending to reenlist.

6. Retention Dimensions: Members in three TAFMS groups (1-48 months TAFMS, 49-96 months TAFMS, and 97+ months TAFMS) agreed on several factors potentially influencing their decision to reenlist or separate. Top five factors for reenlistment (for at least two of the tenure groups) were off-duty education or training opportunities, medical or dental care for AD member, job security, retirement benefits, and pay and allowances. The three TAFMS groups were in even more agreement concerning the top factors for separation, which included pay and allowances and esprit de corps/morale in the top five factors for all three tenure groups.

INTRODUCTION

Air Force Occupational Measurement Squadron (AFOMS)

Occupational Analysis Program

Simply put, our mission is to provide occupational data for decision makers, allowing them to make informed personnel, training, and education decisions based not on opinion and conjecture, but on empirical, quantitative data.

Survey Development Process

An occupational survey begins with a job inventory (JI) -- a list of all the tasks performed by members of a given Air Force Specialty Code (AFSC) as part of their actual career field work (that is, additional duties and the like are not included). We include every function that career field members perform by working with technical training personnel and operational subject-matter experts (SMEs) to produce a task list that is complete and understandable to the typical job incumbent. The SMEs write each task to the same level of specificity across duty areas, and no task is duplicated in the task list.

In addition to this comprehensive task list, job inventories include a number of background questions that deal with demographic information, job satisfaction, equipment usage, and any other area that our customers, such as Career Field Managers (CFMs) and technical school personnel, may request.

Furthermore, the JI is only one of the surveys that AFOMS produces. The JI task list is used in creating several other surveys that are important for developing and refining career field training programs and for developing career field promotion tests; these surveys and how their results are used will be described shortly.

Survey Administration

The sample of members who receive the JI primarily depends on the size of the career ladder. We typically survey 100% of all eligible members in career ladders numbering 3,000 or fewer assigned members. For career ladders larger than 3,000 members, we select a random sample of half of the eligible members, and for very large career ladders we may sample one-third of all the eligible members. Return rates (the percentage of completed, usable surveys we receive back from the field) generally run between 50% - 70% or greater. All this combines to produce very large and very representative samples in almost every study we conduct, compared to the samples obtained by private commercial surveying and marketing firms, and this in turn leads to highly accurate information about the work and demographics of the career field.

Responding to the JI can be somewhat time-consuming when the number of tasks is large, but it is a simple process. Respondents are asked to examine each task and select each task that they perform in their present job. They are then asked to rate each task they chose on a scale of 1 to 9 (unchosen tasks

are given a 0 rating), according to how much relative time they spend performing that task in their present job, compared to all the other tasks in the inventory. These ratings are converted into estimates of actual relative job time spent performing each task.

Survey Analysis

Survey responses are processed using a set of computer programs called the Comprehensive Occupational Data Analysis Programs (CODAP). We are able to calculate some important basic information about each task from the information that respondents provide in the JI: the Percent Members Performing (PMP) and the Percent Time Spent (PTS). CODAP forms groups of survey respondents according to the similarity of their task performance, and our analysts study these groupings to identify distinct jobs. Further, we can provide PMP and PTS information for any subgroup. For example, we can easily determine the percent of E-5s or 3-skill-level or first-term airmen who perform each task, and estimate the average amount of job time they spend performing it. This is important because many of the applications of our data target particular subgroups within the career ladder.

Uses of Survey Data

Survey results are formally reported in an **Occupational Survey Report (OSR)** -- what you are currently reading -- but the OSR is by no means the only product of an occupational survey study. The OSR provides a high-level "snapshot" of an entire AFSC in a compact package, but it is not intended to provide the comprehensive information needed to support important decisions about a career field. That is the purpose of "data extracts," which are comprehensive, detailed sets of CODAP-generated reports designed for particular applications.

The Training Extract -- AFOMS survey data are essential to technical training personnel. The Training Extract provides information about what career ladder incumbents are actually doing in their jobs at each stage of their career, along with supporting information regarding when and how members should be trained to perform their jobs. The data found in the Training Extract regarding first-job, first-term, and 3-skill-level members are the *primary source of empirical information* available to support such decisions.

In addition to the JI, AFOMS produces two other surveys that directly support the training community. Depending on the size of the career ladder, a sample of at least 50 (and frequently 100 or more) 7-skill-level craftsmen is selected to complete a Training Emphasis (TE) survey. A similar-sized sample of other 7-skill-level craftsmen is selected to complete a Task Difficulty (TD) survey.

The TE survey, like the JI, contains the complete career ladder task list, and, like the JI, respondents are asked to rate tasks on a 1 to 9 scale (tasks not rated by the respondent are assigned a "0" rating). Unlike the JI, however, respondents are asked to rate tasks based on how much emphasis they believe should be placed on that task for entry-level structured training. A "1" rating indicates the respondent's belief that very little emphasis be placed on providing structured training on that task. A rating of "9" indicates that it is essential to provide structured training on the task. Structured training is defined as

resident technical schools, field training detachments, mobile training teams, formal on-the-job training (OJT), or any other organized training method. The responses of the entire sample of raters are averaged for each task, and the result is a TE rating for each task.

The TD survey also contains the full task list and requests that respondents rate each task *with which they are familiar* on a scale of 1 to 9 ("1" is low, "9" is high), but this time respondents are asked to rate the amount of time needed to learn to perform that task satisfactorily. In other words, as the name implies, TD is an indicator of how difficult the task is to learn to do. The average TD rating for each task in the inventory is standardized with a mean rating of 5.0 and a standard deviation of 1.0.

When used in conjunction with the PMP and PTS for first-enlistment members, average TE and TD ratings provide insight into the appropriate training requirements for new personnel in the career ladder. These four indices (PMP, PTS, TE, and TD) are used to compute a composite index, the Automated Training Indicator (ATI), for each task. The ATI expresses (in a single number between 1 and 18) a reasonable prediction of the most appropriate training setting and approach for providing training for that task. ATIs allow training developers quickly to focus attention on those tasks that are most likely to qualify for resident course consideration. Further information concerning TE and TD ratings and ATIs for the entire task list can be found in the Training Extract that accompanies this OSR.

The major users of Training Extract information are attendees at Utilization and Training Workshops (U&TWs). The U&TW is a summit of representative career ladder, training, and classification leaders who evaluate current training efficiency and effectiveness in order to propose and approve changes to the Specialty Training Standard (STS) or Course Training Standard (CTS), particularly with regard to 3-skill-level training, and to address utilization issues. The AFSC's job description in Attachment 6 of AFMAN 36-2108, *Enlisted Classification*, is also reviewed and appropriately revised in light of the survey data to reflect the jobs being performed by the career ladder members.

Part of the process of compiling the Training Extract involves the *STS matching* process, during which technical school personnel match JI tasks to STS elements; that is, they tell us what particular task or tasks correspond to each STS element when it is covered in training. This is especially useful when STS performance codes are being reviewed for the 3-skill-level course. For example, the U&TW attendees might be asked to consider adding a task performance code to an STS element that previously has been trained only to a knowledge level. JI, TE, and TD data, combined in the form of the ATI, are important in determining the appropriate proficiency code. Separate Training Extracts are produced for Active Duty (AD) and reserve force (Air National Guard [ANG] and Air Force Reserve Component [AFRC]) members.

The Specialty Knowledge Test (SKT) Extract -- AFOMS survey data are key to ensuring that SKTs are valid. SKTs are an important part of the Weighted Airman Promotion System (WAPS). Because an airman's test score is frequently the deciding factor in determining who is promoted, SKTs must be valid, fair, and credible.

In terms of SKTs, *valid* means that every question on the test is tied to a task which has been shown to be important to successful performance in the specialty. This tie is crucial to documenting the validity of SKT content.

AFOMS surveys provide test writers with information on what percentage of airmen are performing tasks (PMP), an estimate of how much job time they spend performing tasks (PTS), how difficult tasks are to master (TD), and the importance of formal training on tasks (TE). This information is combined to produce a composite index called the Predicted Testing Importance (PTI). Those tasks that are rated highest in PTI are ones that tend to be high in all four of our primary indices -- PMP, PTS, TD, and TE -- exactly the kinds of tasks that one would generally consider job-essential and that should form the basis for test questions. PTI information is used for minor test revisions; how it is used will be explained shortly.

Field-validated testing importance (FVTI) data are produced for major test revisions. Approximately 6 months before the start of test development, a sample of 100 senior career field NCOs is sent a survey containing a list of the 150-200 tasks rated highest in PTI. Respondents are asked to provide a 1-7 rating ("1" is low, "7" is high) of how important they believe it is to include a question concerning that task on the SKT. The responses are averaged for each task, yielding the FVTI index -- a direct measure of the opinions of career field experts as to what constitutes "job-essential" knowledge.

PTI and FVTI information is included in the SKT Extract, which is specifically tailored for use by the SKT teams who come to AFOMS to write the promotion examinations. Two sets of reports are prepared -- one set uses only data for E-5s and the other uses combined data for E-6s and E-7s. Each report gives the SKT team information on every task's PMP, PTS, and PTI, and, for major test revisions, FVTI data. Occupational survey data are thus the only objective source of information available to the team regarding how to make the test they write meet legal requirements for validity and fairness.

The Analysis Extract -- The Analysis Extract is an archive of all the data collected in the course of a study that are not incorporated into one of the other extracts. We typically produce separate Analysis Extracts for AD and ANG/AFRC members. The Analysis Extract is usually an enormous document, a compilation of the many reports that "slice and dice" the data in virtually every potentially useful way. Just about any question anyone has regarding career ladder work, personnel, or training and utilization issues can be answered by consulting reports in the Analysis Extract.

The Occupational Survey Report -- This document, the Occupational Survey Report (OSR), captures survey data and analysis both in breadth and depth. For ease of reading, the first half of the OSR concentrates on breadth with compelling factors and implications across the specialty. Tables following the narrative show depth with regard to these factors and implications. Where appropriate, highlights of the tables are contained in the body.

OCCUPATIONAL SURVEY REPORT (OSR)
BIOENVIRONMENTAL ENGINEERING
(AFSC 4B0X1)

This is a report of an occupational survey of the Bioenvironmental Engineering career ladder, conducted by the Occupational Analysis Flight, AFOMS. The OSR reports the findings of current data that are available for use in guiding the development and evaluation of training and support planned changes within this career ladder. In addition, the data are used to support SKT development. The previous OSR was completed in July 2000.

Career Ladder Background

According to the Specialty Description in AFMAN 36-2108, *Enlisted Classification*, dated 30 April 2002, personnel in this career ladder supervise or perform bioenvironmental engineering functions for monitoring water quality, waste treatment and disposal, chemical spills, hazardous and toxic substances, as well as work environmental hazards of noise, radiation, illumination, ventilation, ergonomics, and thermal stress. They survey and provide technical guidance to base disaster preparedness personnel on chemical, biological, and radiological contaminants. They also inventory base radiation sources and monitor base radioactive waste disposal and shipment.

The initial technical training school for this AFSC is located at Brooks AFB TX. The B3ABY4B031-002, Bioenvironmental Engineering Apprentice course is 14 weeks and 2 days long and provides graduates with the knowledge and skills for the following principles and activities:

- Knowledge and basic skills for communication, basic math, chemistry, physics, ecology, and toxicology
- Familiarization with Air Force, federal, and state environmental protection programs

Entry into AFSC 4B0X1 requires an Armed Forces Vocational Aptitude Battery (ASVAB) "General" score of 48, a strength requirement of "J" (weight lift of 60 lb), normal color vision as defined in AFI 48-123, *Medical Examination and Standards*, qualification to operate government vehicles according to AFI 24-301, *Vehicle Operations*, and a minimum age of 18. For entry into this specialty, completion of an Algebra I course in high school is mandatory.

SURVEY METHODOLOGY

Inventory Development

The data collection instrument for this occupational survey was USAF Job Inventory (JI) Occupational Survey Study Number (OSSN) 2501, dated January 2002. During the development of the comprehensive task list, 25 subject-matter experts from four operational bases and one training unit were interviewed. The survey requested such standard background information as base of assignment; command of assignment; TAFMS, TICF, and TIPJ; job title; work or functional area; paygrade; job satisfaction and reenlistment intentions; and systems, tools, and equipment used or operated. Additional background items concerned special duty jobs, unit/duty training, CDCs and upgrade training, and manning. The inventory listed 458 tasks grouped under 11 duty headings and a background section. (The complete task list is available on the CD-ROM containing the products from this study.)

BASE	REASON FOR VISIT
Brooks AFB TX	Technical Training School
Andrews AFB MD	AMC, notable Environmental Protection Program
Eglin AFB FL	AFMC, notable Radiological Health Program
Seymour Johnson AFB NC	ACC, notable Industrial Hygiene Program
Robins AFB GA	AFMC, largest industrial complex in USAF

4B0X1 Survey Administration

From March to May 2002, the survey control monitor at the technical training school and operational bases administered the inventory to all eligible DAFSC 4B031, 4B051, 4B071 and 4B091 AD, ANG, and AFRC personnel. Members ineligible to take the survey included the following: (1) hospitalized members; (2) members in transition for a permanent change of station; (3) members retiring within the time the inventories were administered to the field; and (4) members who had been in their present jobs for less than 6 weeks. Participants were selected from a computer-generated mailing list obtained from data tapes maintained by the Air Force Personnel Center, Randolph AFB TX.

Survey Sample

The data on survey returns were examined to ensure that the final sample reflected an accurate representation across major commands (MAJCOMs), paygrades, and skill levels. Table 1 shows the distribution of the survey sample by MAJCOM, while Table 2 displays the survey distribution by paygrade groups. Table 3 shows the final sample distribution by skill level. Table 4 displays the component characteristics for the AD, ANG, and AFRC members in the final sample.

TABLE 1

MAJCOM REPRESENTATION OF TOTAL SAMPLE

COMMAND	PERCENT OF ASSIGNED*	PERCENT OF SAMPLE
ACC	14	14
USAFE	5	5
PACAF	8	7
AMC	12	17
AETC	9	9
AFMC	19	23
AFSPC	4	5
OTHER**	4	4
ANG	18	13
AFRC	7	3
TOTAL ASSIGNED*		1,084
TOTAL ELIGIBLE		934
TOTAL SURVEYS MAILED		934
TOTAL IN SAMPLE		581
PERCENT OF ASSIGNED IN SAMPLE		54
PERCENT OF ELIGIBLE IN SAMPLE		62
PERCENT OF MAILED IN SAMPLE		62

* As of Feb 02

** Highest percentages in "Other" include Air Force Academy, Air Force Elements (Other), and Air Force Special Operations Command

TABLE 2

PAYGRADE DISTRIBUTION OF SAMPLE

PAYGRADE	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
E-1 - E-2	4	2
E-3	12	12
E-4	25	25
E-5	28	27
E-6	15	17
E-7	15	15
E-8	1	2
E-9	*	*

* Indicates less than 1%

TABLE 3

SKILL-LEVEL DISTRIBUTION OF SAMPLE

SKILL LEVEL	PERCENT OF ASSIGNED	PERCENT OF SAMPLE
4B031	24	25
4B051	38	41
4B071	36	31
4B091	2	3

TABLE 4

COMPONENT CHARACTERISTICS

	AD	ANG	AFRC
ASSIGNED	807	200	77
SURVEYED	690	181	63
SAMPLE	483	78	20
% OF SURVEYED	70	43	32

The Command, Paygrade, and Skill-Level distributions of the survey sample are close to the percent assigned, indicating that the sample is a reasonable representation of the career ladder population, and is suitable for providing 3- and 5-skill-level data for technical and upgrade training and E-5 and E-6/E-7 data for promotion tests.

4B0X1 JOB STRUCTURE

The first step in the analysis process is to identify the career ladder structure in terms of the jobs performed by the respondents. CODAP creates an individual job description for each respondent based on the tasks performed and relative amount of time spent on these tasks. The CODAP automated job clustering program then compares all the individual job descriptions, locates the two descriptions with the most similar tasks and time spent ratings, and combines them to form a composite job description. In successive stages, CODAP either adds new members to this initial group or forms new groups based on the similarity of tasks and time spent ratings. Human analysis of the final output, aided by additional measures of similarities and differences between groups, determines the final job structure of the career field as described here.

The basic group used in the hierarchical clustering process is the ***Job***. When two or more jobs have a substantial degree of similarity in tasks performed and time spent on tasks, they are grouped together and identified as a ***Cluster*** of jobs. Jobs not falling within any cluster are identified as ***Independent Jobs (IJs)***. The structure of the career ladder is then defined in terms of clusters, jobs, and independent jobs. The job structure resulting from this grouping process (the various jobs within the AFSC) can be used to evaluate the changes that have occurred in the AFSC since the previous OSR. It can also be used to guide future changes in the AFSC. The above terminology will be used in the discussion of the 4B0X1 career ladder.

Specialty Jobs

Based on the analysis of tasks performed and the amount of time spent performing each task, one cluster and eight independent jobs were identified within the Bioenvironmental Engineering career ladder. Figure 1 shows this job structure. A written outline of the job structure follows. The stage (STG) number shown beside each title refers to computer-generated tracking information of no importance to the reader. The letter "N" represents the number of members in each group. Tables 5-14 (at the end of this report, following the narrative) provide detailed descriptions of the cluster and jobs listed below, including demographic information and representative tasks that members perform. In addition, the tables show some distinguishing tasks performed by members of jobs identified within the cluster.

I. INDUSTRIAL HYGIENE INDEPENDENT JOB (STG 81, N=346)

II ENVIRONMENTAL MONITORING CLUSTER (STG 43, N=63)
A. ENVIRONMENTAL PROTECTION JOB (STG 77, N=28)
B. ENTRY-LEVEL WATER PROTECTION JOB (STG 108, N=16)

C. ENVIRONMENTAL PROTECTION NCOIC JOB (STG 103, N=10)

III. ENTRY-LEVEL WATER ANALYSIS INDEPENDENT JOB (STG 65, N=15)

IV. CHEMICAL HAZARDS INDEPENDENT JOB (STG 79, N=6)

V. RADIOLOGICAL HEALTH PROGRAM INDEPENDENT JOB (STG 144, N=6)

VI. RESPIRATORY PROTECTION (RP) INDEPENDENT JOB (STG 100, N=5)

VII. THERMOLUMINESCENT DOSIMETER (TLD) PROGRAM INDEPENDENT JOB (STG 139, N=5)

VIII. MANAGEMENT INDEPENDENT JOB (STG 57, N=51)

IX. TRAINER INDEPENDENT JOB (STG 72, N=7)

Table 15, at the end of this narrative, displays time spent on duties by the members within this cluster and the jobs.

IDENTIFIED JOB STRUCTURE AND PERCENTAGES OF TOTAL SURVEY SAMPLE (N =581)

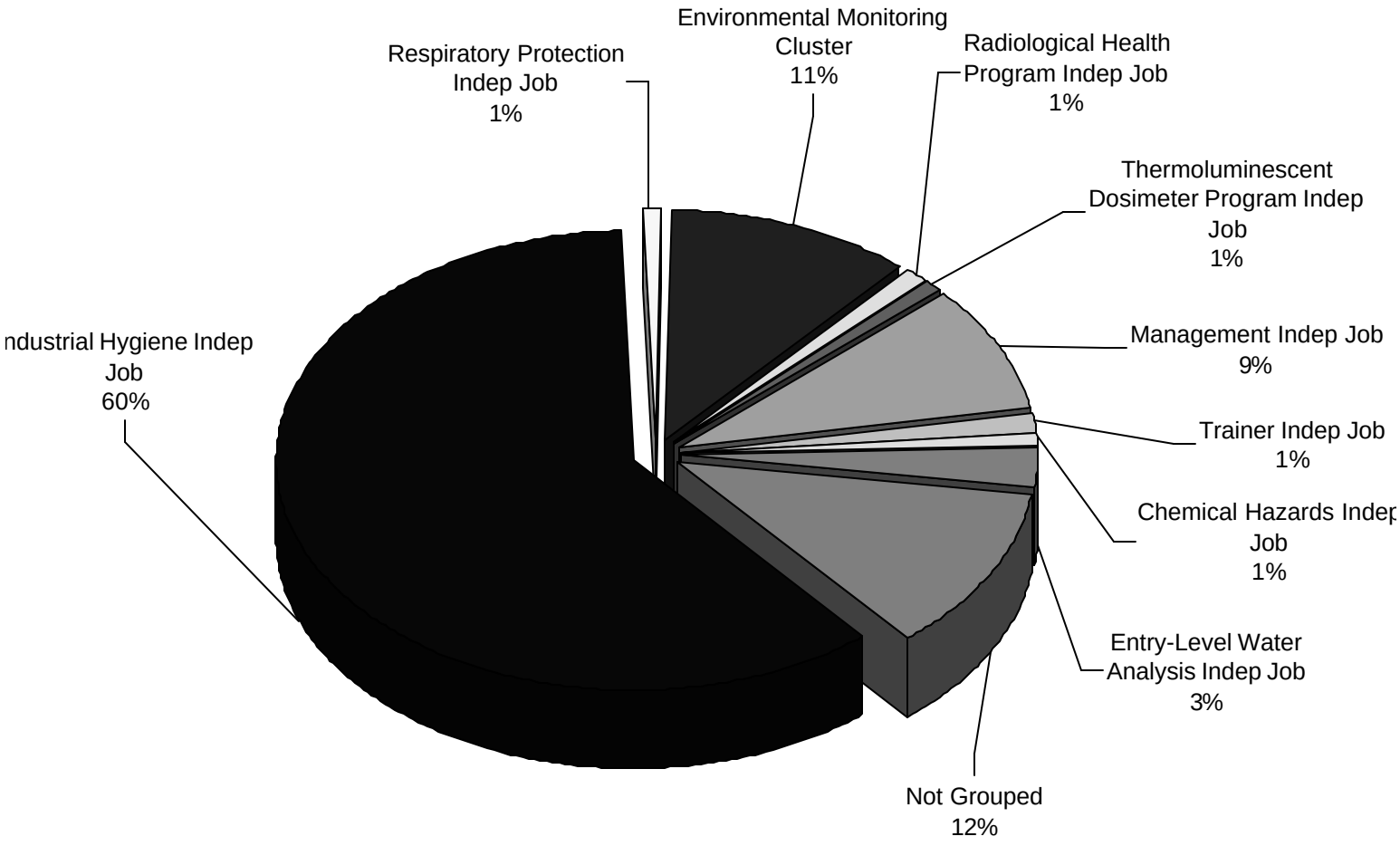

FIGURE 1

Members Not Grouped

- The remaining 12% of survey sample did not group with any cluster or independent job
  - Survey respondents sometimes do not fall into an identified job because they perform fewer tasks or mark the same tasks but give considerably different time spent ratings for those tasks
  - In addition, there may not have been enough individuals performing the same combination of tasks to warrant identification of a job
  - Members not grouped into any cluster or job gave themselves such job titles as, Cross Trainee, Enlisted Functional Mgr, NCOIC Command Core PMO, Wastewater Engineer, NCOIC ESOH, Radioanalytical Counting, Consultant, and Special Programs.
  - Important point to note is that all major AFSC functions are covered in identified cluster and independent jobs

Comparison of Current Specialty Jobs to Previous Survey

Table 16 shows the clusters and jobs identified in this study compared to the previous study conducted in 2000.

- Jobs in which 4B0X1 members were identified in 2000 study were also identified in current study for the most part
  - 2000 survey had the current Industrial Hygiene Independent Job in a cluster broken into an Industrial Hygiene Job and an Entry-level Industrial Hygiene Job
  - 2000 survey had the current Management Independent Job in a cluster broken into a Supervisor Job and Resource Management Job
  - Each survey identified several small independent jobs (eight or fewer members) not in the other survey
- Overall nature of the 4B0X1 career ladder has not changed much since the previous study; still two major technical areas (industrial hygiene and environmental protection) with small pockets of members performing jobs that are more focused

SKILL AND EXPERIENCE ANALYSIS

An analysis of DAFSC groups in conjunction with the analysis of the career ladder structure is an important part of each OSR. This information may be used to evaluate how well career ladder documents, such as AFMAN 36-2108, *Enlisted Classification*, reflect what career ladder personnel are actually doing in the field.

TOTAL SAMPLE

Jobs

Table 17 - Distribution of skill-level members across the career ladder cluster and jobs:

- Majority of 3-, 5-, and 7-skill-level members in Industrial Hygiene Independent Job
- Second highest percentage in Environmental Monitoring Cluster for 3- and 5-skill-level members
- Most DAFSC 4B091 members in Management Independent Job

Duties

Table 18 - Time spent on duties by members of skill-level groups:

- Members at 3-, 5-, and 7-skill levels spend most of their time performing tasks in Duty C (Performing Industrial Hygiene Activities):
  - 3-skill-level members spend much more time Monitoring Drinking Water, Swimming Pools, or Spas (Duty A) than higher skill-level members
- 7- and 9-skill-level members spend 25% and 53% of their time, respectively, performing Management and Supervisory Activities (Duty K), significantly more than DAFSC 4B031 and 4B051 members

AD

Duties

Tables 19-22 - Time spent on duties by AD members of skill-level groups:

- AD members at the 3- and 5-skill levels spend about half of their time performing tasks in Duty C (Performing Industrial Hygiene Activities)

- AD skill-level members spend an increasing percentage of their time performing Management and Supervisory Activities (Duty K), increasing from 3 percent at the 3-skill level to 53% at the 9-skill level

Tasks

Table 20 – Tasks performed by AD 4B031 members:

- Tasks being performed by highest percentages of 3-skill-level members (50% or more) are almost all Industrial Hygiene tasks

Table 21 – Tasks performed by AD 4B051 members:

- 19 of the first 21 tasks being performed by highest percentages of 5-skill-level members are tasks being performed by at least 50 percent of the 3-skill-level members

Table 22 – Tasks performed by AD 4B071 members:

- Heavy emphasis on supervisory tasks at this skill level

Table 23 – Tasks performed by AD 4B091 members:

- Some supervisory tasks but heavy emphasis on managerial tasks such as budgeting and expenses, planning meetings, work priorities and procedures, and developing or evaluating position descriptions

ANG

Duties

Table 24 - Time spent on duties by ANG members of skill-level groups:

- ANG 7-skill-level members spend 37% of their time performing Industrial Hygiene Activities (Duty C) and only 16% on Performing Management and Supervisory Activities (Duty K)

Tasks

Table 25 – Tasks performed by ANG 4B071 members:

- Tasks being performed by highest percentages of 7-skill-level members are from the Performing Industrial Hygiene Activities of Duty C

AFRC

Duties

Table 26 - Time spent on duties by AFRC members of skill-level groups:

- AFRC members at both 5- and 7-skill levels spend most of their time performing tasks in Duty C (Performing Industrial Hygiene Activities)
- AFRC 5-skill-level members spend 20% of their time performing Management and Supervisory Activities (Duty K) which is 5% more time than DAFSC 4B071 members spend on that duty

Tasks

Table 27 – Tasks performed by AFRC 4B051 members:

- Tasks being performed by highest percentages of 5-skill-level members cover Industrial Hygiene tasks (Duty C) and Management and Supervisory tasks (Duty K), with some Duty F (Performing or Practicing Wartime Disaster Operations) tasks and Duty J (Performing Training Activities) tasks

Table 28 – Tasks performed by AFRC 4B071 members:

- Heavy emphasis on Duty C (Performing Industrial Hygiene Activities) tasks with some Duty J (Performing Training Activities) tasks

TRAINING ANALYSIS

Occupational survey data are a source of information that can assist in the development or evaluation of training programs for both entry-level and advanced members. In particular, the factors used to evaluate entry-level member training include the jobs that are being performed by first-enlistment personnel (1-48 months' TAFMS), the overall distribution of first-enlistment personnel across career ladder jobs, the percent of first-enlistment members who perform specific tasks, and ratings of relative training emphasis (TE) and task difficulty (TD). (TE and TD ratings are discussed in the Task Factor Administration section of this OSR.)

WHAT ENTRY-LEVEL MEMBERS NEED TO KNOW

First-Enlistment Personnel (1–48 months' TAFMS)

N=177 (30% of sample)

Jobs

Figure 2 - Distribution of first-enlistment personnel across specialty cluster and jobs

- No first-enlistment personnel in Management and Trainer Independent Jobs
- Increases of 7% in Industrial Hygiene Independent Job, 7% in Environmental Monitoring Cluster, and 4% in Entry-Level Water Analysis Independent Job versus jobs for total sample (Figure 1)

Duties

Table 29 - Relative time spent on duties

- Similar to 3-skill-level time spent on duties (Table 19)

Tasks

Table 30 - Representative tasks performed

- Similar to 3-skill-level percent members performing tasks (Table 20)

Equipment/Software/Forms

Table 31 – Support equipment used or operated

- Air, noise, water, and chemical testing equipment are all used by at least 50% of first-termers

Table 32 – Software used or operated

- Command Core, EMIS, HMIS, and Portacount software are used by at least 50% of first-termers

Table 33 - Forms used

- First-term airmen use a large number of AF 2700-series forms

DISTRIBUTION OF AFSC 4B0X1 FIRST-ENLISTMENT PERSONNEL ACROSS SPECIALTY JOBS (N=177)

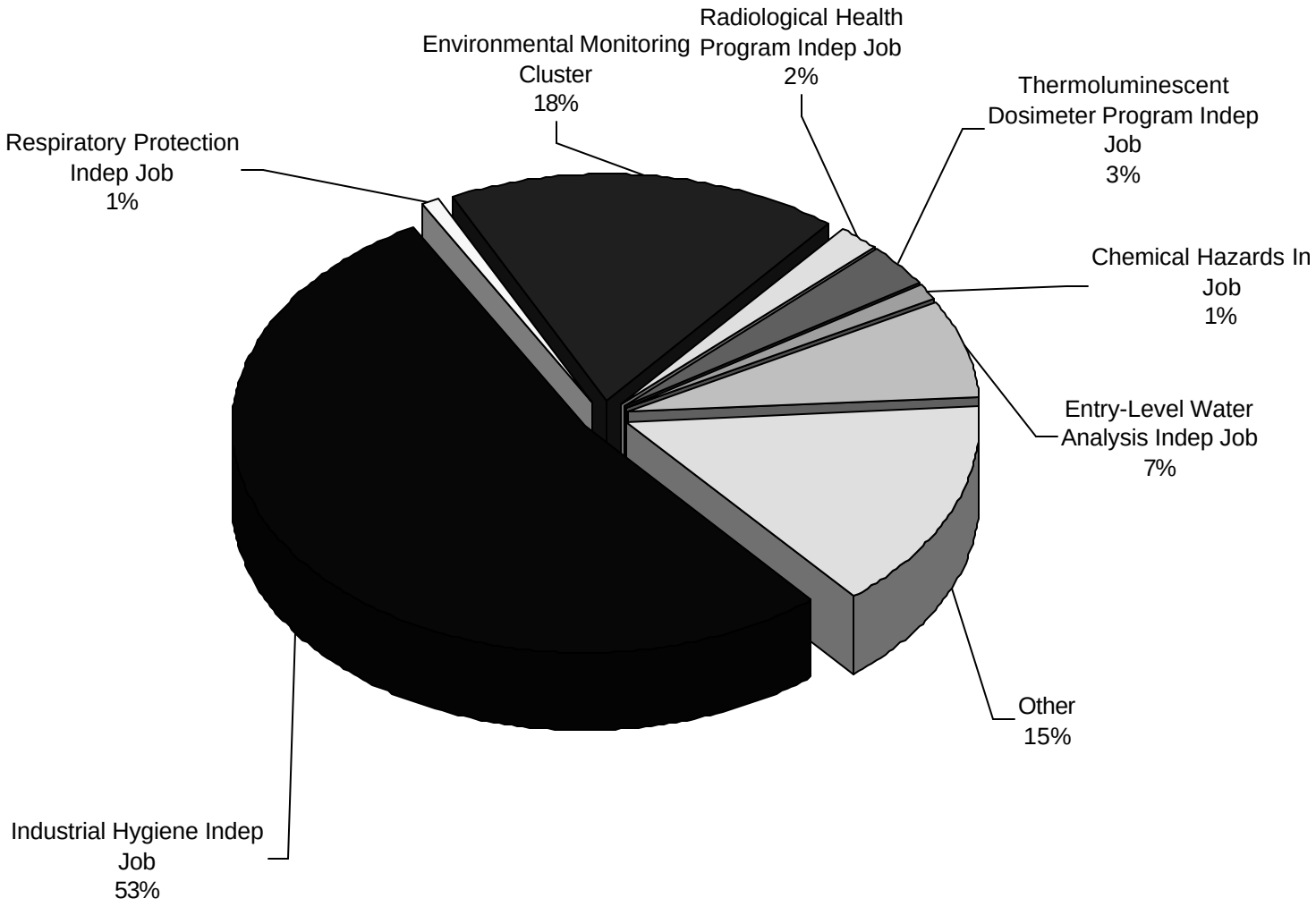

FIGURE 2

TASK FACTOR SURVEYS

Job descriptions alone do not provide sufficient data for making decisions about career ladder documents or training programs. Task factor information, along with data from the Specialty Training Standard (STS), is needed for a complete analysis of the career ladder. To obtain the needed task factor data, selected DAFSC 4B0X1 members (generally E-6 or E-7 craftsmen) completed either a training emphasis (TE) or task difficulty (TD) survey. The training STS was reviewed first by matching survey tasks to STS elements, then examining task performance, TE, and TD data for the matched tasks.

Task Factor Administration

TE and TD data can help training development personnel decide which tasks to emphasize for entry-level, structured training (resident technical schools, field training detachments, mobile training teams, formal OJT, or any other organized training method). For example, tasks receiving high TE and TD ratings generally warrant resident training if they are also performed by a moderate-to-high percentage of first-enlistment members. Tasks receiving high TE and/or TD ratings but being performed by relatively low percentages of first-enlistment members may be more appropriately planned for structured OJT programs within the career ladder. Low TE and/or TD ratings may highlight tasks best omitted from training for new personnel. These task factors are, of course, not the only ones to weigh in making training decisions; the percentages of personnel performing the tasks, command concerns, the criticality of the tasks, and other important factors must also be carefully considered.

Training Emphasis (TE) — degree of emphasis that should be placed on each task for structured training of entry-level members:

- Forty-seven DAFSC 4B0X1 senior noncommissioned officers (NCOs) rated tasks in the inventory on a scale from 0 (no training required) to 9 (extremely high training emphasis)
- Average TE rating was 2.82 with a standard deviation of 1.68
    - If a task has a TE rating at least one standard deviation above the mean, that is, of at least 4.50, it is probably important to provide new personnel with formal training on that task

Table 34 - Tasks with highest TE ratings

- Most tasks with high TE ratings are from Duty C (Performing Industrial Hygiene Activities) with a few tasks from Duty F (Performing or Practicing Wartime Disaster Operations)

Task Difficulty (TD) — amount of time needed to learn to perform that task satisfactorily

- Forty-nine DAFSC 4B0X1 senior NCOs rated the difficulty of tasks in the inventory using a scale from 1 (extremely low difficulty) to 9 (extremely high difficulty)

- TD ratings are normally adjusted so that tasks of average difficulty have a value of 5.00 and a standard deviation of 1.00

    - Any task with a difficulty of 6.00 or greater is therefore considered difficult to learn

Table 35 - Tasks with highest TD ratings

- Also lists percent members performing these tasks by groups of 1-24 months' and 1-48 months' TAFMS, as well as members of the 3-, 5-, and 7-skill-level groups

- Tasks within Duty D (Performing Radiological Health Program Activities) and a few in Duty C (Performing Industrial Hygiene Activities) received the highest TD ratings but low TE ratings -- high TD often implies low TE

- Unlike tasks with high TE ratings, many tasks with high TD ratings have low percent members performing

    - This pattern is typical across many career fields because relatively few members perform the most difficult tasks

WHAT DOES 4B0X1 TRAINING DOCUMENT REFLECT?

Specialty Training Standard (STS) Analysis

Technical school personnel from the USAF School of Aerospace Medicine, Brooks AFB TX, matched JI tasks to elements in a "strawman" STS. This STS was developed for an upcoming Utilization and Training Workshop (U&TW) and was developed with the Job Inventory for this report. Per AETCI 36-2601, dated 14 July 1999, STS elements that are performed by at least 20% of members in appropriate skill-level groups [particularly first-job (1-24 months' TAFMS) members and first-enlistment (1-48 months' TAFMS) members] should be included in the STS. Of course, these are not the only criteria for inclusion, and other rational considerations may argue against inclusion. Likewise, proficiency-coded elements matched to tasks with less than 20% performing in first-job and first-enlistment groups should be reviewed by subject-matter experts for possible deletion from the STS, unless other considerations (such as mission criticality or criticality to a particular MAJCOM) argue for inclusion. As stated above, tasks not referenced to the STS with at least 20% of the first-job or first-enlistment members performing should be reviewed by training personnel for possible addition to the STS. Finally, several tasks with 20% or more members performing were matched to STS elements without proficiency codes. These STS elements should be reviewed for possible proficiency code revision.

Proficiency-coded STS elements associated with survey tasks performed by fewer than 20% of job incumbents in their first job or first enlistment are considered not supported by data. Unsupported STS elements should be reviewed for possible proficiency code revision.

Table 36 – Examples of STS elements that are proficiency coded but not supported by survey data along with the tasks matched to those items:

- Some examples out of a handful of unsupported STS elements with "1a" proficiency codes; only one unsupported "2b" STS element was found
- A complete listing of STS elements with tasks matched to elements can be found in the STS report in the Training Extract

Table 37 – There was only one task not referenced to any STS element with 20% or more members performing:

Table 38 – Examples of tasks with 20% or more members performing matched to STS elements without proficiency codes:

- A complete listing of tasks matched to STS elements can be found in the STS report in the Training Extract; these STS elements should be reviewed for possible proficiency code revision

Overall, the STS is very well supported by the survey data.

JOB SATISFACTION ANALYSIS

An examination of job satisfaction indicators can give career ladder managers a better understanding of factors that may affect the job performance of career ladder airmen. The survey included attitude questions covering job interest, perceived utilization of talents and training, sense of accomplishment from work, and reenlistment intentions.

Job Satisfaction

Overall = Good

Table 39 - Job satisfaction data by specialty job groups identified in **4B0X1 JOB STRUCTURE** section of this report

- Entry-level Water Analysis Independent Job (N=15) - very low sense of accomplishment with reenlistment intentions to match
- Thermoluminescent Dosimeter Program Independent Job (N=5) – reenlistment intentions at 0% although other indicators are good

Table 40 displays comparative job satisfaction data between the current 4B0X1 OSR data and members from all other (non-lateral) 4XXXX AFSCs surveyed in the previous 12 months.

- Overall, 4B0X1 members are somewhat less likely to select the highest rating of job satisfaction
- Reenlistment intentions for 4B0X1 airmen are very similar to the other 4XXXX AFSCs in all three TAFMS categories

Table 41 displays job satisfaction data for the AD, ANG, and AFRC members.

- Job satisfaction ratings for the ANG members are higher than the AD and AFRC members, especially for job interest and sense of accomplishment from job

Table 42 compares job satisfaction data for the current 4B0X1 data and the 2000 4B0X1 survey.

- Overall, job satisfaction ratings for the 4B0X1 members in the current study are slightly lower for first-enlistment, slightly higher for second-enlistment, and similar for career compared to the 4B0X1 members in the previous study

RETENTION DIMENSIONS

JIs also routinely collect information about factors that affect reenlistment and separation decisions. That is, respondents who say that they are likely to reenlist at the end of their present term are asked to indicate whether each of 31 different factors will have any effect on their intended decision and, if so, the degree to which each factor may influence their decision to reenlist. Respondents who indicate that they are likely to separate at the end of their present term (other than for retirement) are asked to indicate whether each of 31 different factors will have any effect on their intended decision and, if so, the degree to which each factor may influence their decision to separate. The degree is indicated on a 3-point scale ranging from "slight influence" to "strong influence".

Reenlistment

Table 43 - Lists the 31 factors in the order they appeared in the survey. The percent selecting each factor and the average rating for each factor by TAFMS group based on how much each factor may influence their decision to reenlist are also shown

- Top 5 reasons members may choose to reenlist based on the highest percentages selecting each factor are listed below Table 43
    - Off-duty education or training opportunities appeared in the top five for each of the three TAFMS groups
    - Retirement benefits, job security, education or training opportunities, and pay and allowances were major influences on reenlistment for both second-term and career airmen

Separation

Table 44 - Displays the percentage of the members for each TAFMS group indicating that their plans to separate may be influenced by each factor as well as the average ratings by TAFMS group for the 31 factors based on the influence each factor may have on the respondents' decisions to separate:

- Top 5 reasons members in each TAFMS group may choose to separate based on the highest percentages selecting each factor are listed below Table 44
    - Pay and allowances and esprit de corps/morale are in the top five factors for each TAFMS group

TABLE 5

INDUSTRIAL HYGIENE INDEPENDENT JOB (STG 81)
N=346 (60% of TOTAL SAMPLE)

DEMOGRAPHICS

Average Time in Present Job	42 months	
Average TAFMS	94 months	
Predominant Paygrades	E-4	27%
	E-5	31%
	E-6	18%
Skill Levels	4B031	21%
	4B051	46%
	4B071	32%

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 158*	PERCENT MEMBERS PERFORMING
C0130	Verify chemical inventories	95
C0129	Evaluate shop hazardous communication (HAZCOM) programs	95
C0125	Evaluate chemical inhalation hazards	95
C0105	Interview shop personnel	94
C0121	Research and interpret material safety data sheets (MSDSs)	93
C0104	Conduct opening and closing conferences	92
C0124	Evaluate chemical contact or absorption hazards	92
C0106	Brief shop personnel on chemical, biological, or physical hazards	91
C0120	Identify chemical inhalation hazards	91
C0159	Identify hazardous noise sources	90
C0126	Determine or establish administrative controls for chemical hazards	90
C0119	Identify chemical contact or absorption hazards	89
C0161	Perform sound-level measurements, such as dBA or dBC	89
C0150	Determine or establish personal protective equipment (PPE) controls for chemical hazards	87
C0142	Perform routine ventilation surveys	86
C0127	Determine or establish engineering controls for chemical hazards	86
C0169	Verify adequacy of hearing protection devices	85
C0163	Perform noise dosimetry surveys	85
C0108	Prepare activity based survey reports	84
C0138	Interpret IH air sampling results	84
C0131	Determine or establish air sampling strategies	83
C0171	Identify and establish hazardous noise areas	83
C0167	Evaluate results of noise measurements	82
C0135	Collect breathing zone air samples for compliance	82
C0115	Evaluate workplace for pregnant worker exposures	81
C0154	Perform quantitative fit-testings, such as port-a-count, other than gas masks	79
C0139	Determine or establish follow-up actions for air sampling results	79
C0155	Evaluate work areas for RP compliance	78
C0111	Research Air Force, joint service, federal, state, or local IH standards	78
C0136	Collect breathing zone air samples for screening	78
C0134	Collect area air samples from industrial environments	78

TABLE 6

ENVIRONMENTAL MONITORING CLUSTER (STG 43)
N=63 (11% of TOTAL SAMPLE)

DEMOGRAPHICS

Average Time in Present Job	26 months	
Average TAFMS	75 months	
Predominant Paygrades	E-3	22%
	E-4	33%
	E-5	25%
	E-6	13%
Skill Levels	4B031	49%
	4B051	43%
	4B071	8%

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 75*	PERCENT MEMBERS PERFORMING
A0021	Perform pH analyses	95
A0019	Perform chlorine analyses	95
A0023	Collect potable water samples for bacterial analyses	92
A0013	Collect water samples from swimming pools, hot tubs, or spas	84
A0027	Transport water samples	83
A0030	Document results of analyses	83
A0026	Prepare water samples for shipment	81
A0043	Investigate water quality complaints	81
A0011	Perform preseason inspections of swimming pools, hot tubs, or spas	81
A0015	Perform postseason inspections of swimming pools, hot tubs, or spas	81
A0031	Research federal, state, or local drinking water regulations	76
A0038	Prepare water sampling reports	71
A0029	Perform bacteriological analyses of water with presence-absence technique	68
B0064	Prepare environmental samples for shipment including forms, labels, or chains of custody	68
B0058	Collect bulk environmental samples, such as air, soil, paint, asbestos, or hazardous waste	63
C0154	Perform quantitative fit-testings, such as port-a-count, other than gas masks	62
B0059	Collect non-potable water samples, such as storm or waste water	62
A0032	Interpret results from chemical analyses of drinking water samples	60
B0065	Document results of environmental sampling analyses	59
A0020	Perform fluoride analyses	59
A0004	Calibrate and operationally check potable water equipment	59
A0016	Investigate results of abnormal swimming pool, hot tub, or spa samplings	59
A0024	Collect potable water samples for chemical analyses	57
A0010	Prepare or preserve sample containers	57
F0258	Perform fit testings for chemical warfare masks	56
A0035	Interpret results from bacteriological analyses of water analyzed with presence-absence technique	56
C0130	Verify chemical inventories	52
C0163	Perform noise dosimetry surveys	51
C0106	Brief shop personnel on chemical, biological, or physical hazards	51
C0142	Perform routine ventilation surveys	49
A0044	Evaluate disinfection of new water mains, water main breaks, or repairs	49

TABLE 7

JOBS IDENTIFIED WITHIN ENVIRONMENTAL MONITORING CLUSTER

ENVIRONMENTAL PROTECTION JOB (STG 77)
N=28 (44% OF CLUSTER)

DEMOGRAPHICS

Average Time in Present Job	27 months	
Average TAFMS	52 months	
Predominant Paygrades	E-3	25%
	E-4	50%
Skill Levels	4B031	54%
	4B051	46%

DISTINGUISHING TASKS

A0019	Perform chlorine analyses
A0023	Collect potable water samples for bacterial analyses
C0154	Perform quantitative fit-testings, such as port-a-count, other than gas masks
A0013	Collect water samples from swimming pools, hot tubs, or spas
C0130	Verify chemical inventories
C0163	Perform noise dosimetry surveys
C0161	Perform sound-level measurements, such as dBA or dBC
C0142	Perform routine ventilation surveys
B0058	Collect bulk environmental samples, such as air, soil, paint, asbestos, or hazardous waste

ENTRY-LEVEL ENVIRONMENTAL PROTECTION JOB (STG 108)
N=16 (25% OF CLUSTER)

DEMOGRAPHICS

Average Time in Present Job	21 months	
Average TAFMS	43 months	
Predominant Paygrade	E-3	81%
Skill Levels	4B031	81%
	4B051	19%

DISTINGUISHING TASKS

A0019	Perform chlorine analyses
A0021	Perform pH analyses
A0023	Collect potable water samples for bacterial analyses
A0027	Transport water samples
A0026	Prepare water samples for shipment

TABLE 7

JOBS IDENTIFIED WITHIN ENVIRONMENTAL MONITORING CLUSTER (cont)

ENVIRONMENTAL PROTECTION NCOIC JOB (STG 103)
N=10 (16% OF CLUSTER)

DEMOGRAPHICS

Average Time in Present Job	30 months	
Average TAFMS	162 months	
Paygrades	E-5	60%
	E-6	40%
Skill Levels	4B031	10%
	4B051	60%
	4B071	30%

DISTINGUISHING TASKS

A0031	Research federal, state, or local drinking water regulations
A0043	Investigate water quality complaints
J0358	Conduct OJT
A0027	Transport water samples
K0385	Counsel subordinates concerning personal matters
J0359	Counsel trainees on training progress
B0059	Collect non-potable water samples, such as storm or waste water
K0453	Write recommendations for awards or decorations
B0051	Research federal, state, or local environmental protection regulations
A0032	Interpret results from chemical analyses of drinking water samples
A0038	Prepare water sampling reports
B0065	Document results of environmental sampling analyses
A0048	Perform water vulnerability assessments for potable water
J0360	Determine training requirements
H0319	Pick up, deliver, or store equipment, tools, parts, or supplies
A0002	Develop site sampling plans for water samplings
H0310	Inventory equipment, tools, parts, or supplies
K0427	Inspect personnel for compliance with military standards

TABLE 8

ENTRY-LEVEL WATER ANALYSIS INDEPENDENT JOB (STG 65)
N=15 (3% of TOTAL SAMPLE)

DEMOGRAPHICS

Average Time in Present Job	13 months	
Average TAFMS	24 months	
Predominant Paygrades	E-2	27%
	E-3	47%
Skill Levels	4B031	93%
	4B051	7%

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 19*	PERCENT MEMBERS PERFORMING
A0019	Perform chlorine analyses	100
A0021	Perform pH analyses	93
A0023	Collect potable water samples for bacterial analyses	93
A0027	Transport water samples	87
A0026	Prepare water samples for shipment	80
A0030	Document results of analyses	67
A0013	Collect water samples from swimming pools, hot tubs, or spas	53
A0004	Calibrate and operationally check potable water equipment	53
A0010	Prepare or preserve sample containers	53
A0020	Perform fluoride analyses	47
A0029	Perform bacteriological analyses of water with presence-absence technique	47

TABLE 9

CHEMICAL HAZARDS INDEPENDENT JOB (STG 79)
N=6 (1% of TOTAL SAMPLE)

DEMOGRAPHICS

Average Time in Present Job	17 months	
Average TAFMS	63 months	
Predominant Paygrade	E-5	67%
Skill Levels	4B031	33%
	4B051	50%
	4B071	17%

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 27*	PERCENT MEMBERS PERFORMING
C0130	Verify chemical inventories	100
C0129	Evaluate shop hazardous communication (HAZCOM) programs	100
C0125	Evaluate chemical inhalation hazards	100
C0124	Evaluate chemical contact or absorption hazards	100
C0126	Determine or establish administrative controls for chemical hazards	100
C0127	Determine or establish engineering controls for chemical hazards	83
C0128	Determine or establish regulated areas for chemical hazards	83
C0159	Identify hazardous noise sources	83
C0105	Interview shop personnel	67
C0104	Conduct opening and closing conferences	67
C0150	Determine or establish personal protective equipment (PPE) controls for chemical hazards	50
C0121	Research and interpret material safety data sheets (MSDSs)	50
C0123	Recommend procedures for regulating hazardous chemicals	50
C0161	Perform sound-level measurements, such as dBA or dBC	50
C0154	Perform quantitative fit-testings, such as port-a-count, other than gas masks	50
C0163	Perform noise dosimetry surveys	50
C0153	Perform qualitative fit-testings, such as banana oil or irritant smoke	50
C0109	Perform administrative area surveys	50
C0111	Research Air Force, joint service, federal, state, or local IH standards	50

TABLE 10

RADIOLOGICAL HEALTH PROGRAM INDEPENDENT JOB (STG 144)
N=6 (1% of TOTAL SAMPLE)

DEMOGRAPHICS

Average Time in Present Job	29 months	
Average TAFMS	87 months	
Predominant Paygrades	E-3	33%
	E-4	17%
	E-5	33%
Skill Levels	4B031	33%
	4B051	50%
	4B071	17%

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 92*	PERCENT MEMBERS PERFORMING
D0207	Survey radioactive permit areas	100
D0205	Inventory radioactive material sources	100
D0210	Prepare radiological swipes for shipment	100
D0212	Review or interpret results of isotope swipe analyses	100
D0211	Record results of isotope swipe analyses	100
D0213	Inventory ionizing radiation producing devices, meters, or facilities	100
D0206	Survey radioactive material storage areas	100
D0209	Perform swipe testings of radiological sources	100
D0217	Inspect radiation safety programs of X-ray facilities	100
D0233	Conduct as-low-as-reasonably-achievable (ALARA) training	100
D0214	Perform environmental measurements of X-ray facilities	100
D0218	Determine or establish radiation doses or dose rates	100
D0195	Evaluate RFR controls	100
D0190	Inventory radio frequency radiation (RFR) sources	100
D0193	Perform RFR site inspection surveys	100
D0192	Calculate RFR hazard distances	100
D0191	Calculate RFR permissible exposure limits (PELs)	100
D0203	Monitor radioisotope permit programs	83
D0204	Calculate radiation intensities	83
D0208	Inspect radioactive materials for transport	83
D0215	Evaluate operational procedures in ionizing radiation producing device areas	83
D0230	Coordinate disposal methods for radioactive waste with Air Force Radioactive and Mixed Waste (AFRMW) office	83
D0199	Perform laser theoretical hazard (LHAZ) evaluations	83
D0225	Investigate exposures above action levels or overexposures to ionizing radiation	83
D0194	Perform RFR measurement surveys	83
J0358	Conduct OJT	83
F0257	Don or doff PPE	83
D0198	Inventory laser sources	83
C0161	Perform sound-level measurements, such as dBA or dBC	83
D0196	Investigate suspected RFR overexposures	83
D0219	Enroll personnel in thermoluminescent dosimeter (TLD) programs	67

TABLE 11

RESPIRATORY PROTECTION INDEPENDENT JOB (STG 100)
N=5 (1% of TOTAL SAMPLE)

DEMOGRAPHICS

Average Time in Present Job	18 months	
Average TAFMS	134 months	
Predominant Paygrades	E-4	40%
	E-5	20%
	E-6	20%
Skill Levels	4B031	20%
	4B051	20%
	4B071	60%

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 23*	PERCENT MEMBERS PERFORMING
C0154	Perform quantitative fit-testings, such as port-a-count, other than gas masks	100
C0105	Interview shop personnel	100
C0104	Conduct opening and closing conferences	100
C0159	Identify hazardous noise sources	100
F0258	Perform fit testings for chemical warfare masks	80
C0152	Conduct RP training	80
C0106	Brief shop personnel on chemical, biological, or physical hazards	80
C0161	Perform sound-level measurements, such as dBA or dBC	80
C0101	Perform routine activity based surveillances	60
C0163	Perform noise dosimetry surveys	60
C0115	Evaluate workplace for pregnant worker exposures	60
C0141	Perform initial ventilation surveys	40
C0130	Verify chemical inventories	40
C0124	Evaluate chemical contact or absorption hazards	40
A0023	Collect potable water samples for bacterial analyses	40
C0129	Evaluate shop hazardous communication (HAZCOM) programs	40
C0143	Perform baseline ventilation surveys	40
C0184	Identify confined-space hazards	40
C0153	Perform qualitative fit-testings, such as banana oil or irritant smoke	40
C0155	Evaluate work areas for RP compliance	40
F0257	Don or doff PPE	40
C0151	Select respiratory protection (RP) equipment	40
C0108	Prepare activity based survey reports	20
C0107	Record results of activity based surveys, such as data entry into Command Core System	20
C0142	Perform routine ventilation surveys	20
C0173	Perform thermal stress surveys	20
K0433	Participate in councils, boards, or committee meetings, such as base facility utilization boards or environmental protection committees	20

TABLE 12

THERMOLUMINESCENT DOSIMETER PROGRAM INDEPENDENT JOB (STG 139)
N=5 (1% of TOTAL SAMPLE)

DEMOGRAPHICS

Average Time in Present Job	14 months	
Average TAFMS	25 months	
Paygrades	E-2	40%
	E-3	20%
	E-4	40%
Skill Levels	4B031	80%
	4B051	20%

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 55*	PERCENT MEMBERS PERFORMING
D0220	Exchange TLDs	100
D0223	Review or interpret TLD results	100
D0224	Review or interpret histories of occupational exposure to ionizing radiation	100
D0219	Enroll personnel in thermoluminescent dosimeter (TLD) programs	100
D0221	Evaluate storage of TLDs	100
D0222	Prepare TLDs for shipment	100
D0225	Investigate exposures above action levels or overexposures to ionizing radiation	100
F0258	Perform fit testings for chemical warfare masks	60
D0233	Conduct as-low-as-reasonably-achievable (ALARA) training	60
C0154	Perform quantitative fit-testings, such as port-a-count, other than gas masks	60

TABLE 13

MANAGEMENT INDEPENDENT JOB (STG 57)
N=51 (9% of TOTAL SAMPLE)

DEMOGRAPHICS

Average Time in Present Job	43 months	
Average TAFMS	219 months	
Predominant Paygrades	E-6	27%
	E-7	53%
	E-8	16%
Skill Levels	4B051	12%
	4B071	68%
	4B091	20%

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 101*	PERCENT MEMBERS PERFORMING
K0434	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	94
K0453	Write recommendations for awards or decorations	90
K0385	Counsel subordinates concerning personal matters	88
K0428	Interpret policies, directives, or procedures for subordinates	88
J0368	Evaluate progress of trainees	82
J0367	Evaluate personnel to determine training needs	82
K0382	Conduct supervisory orientations for newly assigned personnel	82
K0378	Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	80
J0371	Maintain training records or files	80
K0420	Evaluate personnel for promotion, demotion, reclassification, or special awards	80
K0427	Inspect personnel for compliance with military standards	78
J0358	Conduct OJT	78
J0360	Determine training requirements	76
K0449	Schedule personnel for TDY assignments, leaves, or passes	76
K0419	Evaluate personnel for compliance with performance standards	73
K0457	Write or indorse military performance reports or appraisals	73
J0359	Counsel trainees on training progress	73
K0408	Establish performance standards for subordinates	73
J0355	Brief personnel on training programs or matters	73
J0362	Develop training programs, plans, or procedures	71
K0383	Conduct supervisory performance feedback sessions	71
K0444	Plan or schedule work assignments or priorities	69
K0376	Assign personnel to work areas or duty positions	69
K0380	Conduct self-inspections or self-assessments	69
K0394	Develop or establish work schedules	69
K0386	Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	69
K0425	Initiate actions required due to substandard performance of personnel	69
K0422	Evaluate work schedules	67
K0407	Establish organizational policies, such as OIs, or standard operating procedures (SOPs)	67
K0445	Review drafts of supplements or changes to directives, such as policy directives, instructions, or manuals	65

J0366	Evaluate effectiveness of training programs, plans, or procedures	65

TABLE 14

TRAINER INDEPENDENT JOB (STG 72)
N=7 (1% of TOTAL SAMPLE)

DEMOGRAPHICS

Average Time in Present Job	16 months	
Average TAFMS	180 months	
Predominant Paygrades	E-5	43%
	E-6	43%
Skill Levels	4B051	29%
	4B071	71%

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED* *32*	PERCENT MEMBERS PERFORMING
J0357	Conduct formal course classroom training	100
J0372	Personalize lesson plans	100
J0364	Develop or procure training materials or aids	100
J0365	Establish or maintain study reference files	100
J0360	Determine training requirements	83
J0361	Develop formal course curricula, plans of instruction (POIs), or specialty training standards (STSs)	83
J0362	Develop training programs, plans, or procedures	83
J0370	Inspect training materials or aids for operation or suitability	83
K0434	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	67
J0368	Evaluate progress of trainees	67
J0353	Administer or score tests	67
J0363	Develop written tests	67
J0359	Counsel trainees on training progress	50
J0371	Maintain training records or files	50
J0355	Brief personnel on training programs or matters	50
J0369	Evaluate training methods or techniques of instructors	50
J0366	Evaluate effectiveness of training programs, plans, or procedures	50
I0344	Operate field communications systems	50
J0373	Prepare or modify job qualification standards (JQSs)	50
H0319	Pick up, deliver, or store equipment, tools, parts, or supplies	50
H0310	Inventory equipment, tools, parts, or supplies	50
J0363	Develop written tests	67

TABLE 15

AVERAGE PERCENT TIME SPENT ON DUTIES
BY 4B0X1 CLUSTER AND JOBS

DUTIES	INDUSTRIAL HYGIENE INDEP JOB (N=346) (STG 81)	ENVIRON MONITORING CLUSTER (N=63) (STG 43)	ENTRY-LVL WATER ANALYSIS INDEP JOB (N=15) (STG 65)	CHEMICAL HAZARDS INDEP JOB (N=6) (STG 79)
A MONITORING DRINKING WATER, SWIMMING POOLS, OR SPAS	5	35	72	*
B PERFORMING ENVIRONMENTAL MONITORING	5	13	11	4
C PERFORMING INDUSTRIAL HYGIENE ACTIVITIES	50	25	9	89
D PERFORMING RADIOLOGICAL HEALTH PROGRAM ACTIVITIES	6	4	1	1
E PERFORMING OR PRACTICING PEACETIME DISASTER OPERATIONS	2	2	*	*
F PERFORMING OR PRACTICING WARTIME DISASTER OPERATIONS	5	4	2	*
G PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	2	1	1	0
H PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	4	3	1	1
I PERFORMING MEDICAL READINESS ACTIVITIES	3	3	*	1
J PERFORMING TRAINING ACTIVITIES	5	3	1	1
K PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	12	6	1	2

* Indicates less than 1%
Note: Columns may not add to 100 due to rounding

TABLE 15 (CONTINUED)

AVERAGE PERCENT TIME SPENT ON DUTIES
BY 4B0X1 CLUSTER AND JOBS

	DUTIES	RADIOLOGIC HEALTH PROGRAM INDEP JOB (N=6) (STG 144)	RESPIRATORY PROTECTION INDEP JOB (N=5) (STG 100)	TLD PROGRAM INDEP JOB (N=5) (STG 139)	MGMT INDEP JOB (N=51) (STG 57)	TRAINER INDEP JOB (N=7) (STG 72)
A	MONITORING DRINKING WATER, SWIMMING POOLS, OR SPAS	2	5	1	2	2
B	PERFORMING ENVIRONMENTAL MONITORING	2	3	8	2	2
C	PERFORMING INDUSTRIAL HYGIENE ACTIVITIES	19	78	30	10	5
D	PERFORMING RADIOLOGICAL HEALTH PROGRAM ACTIVITIES	52	*	53	1	0
E	PERFORMING OR PRACTICING PEACETIME DISASTER OPERATIONS	5	0	*	3	0
F	PERFORMING OR PRACTICING WARTIME DISASTER OPERATIONS	7	9	5	7	6
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	1	0	0	4	1
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	1	0	1	3	9
I	PERFORMING MEDICAL READINESS ACTIVITIES	1	*	0	6	5
J	PERFORMING TRAINING ACTIVITIES	5	0	0	16	56
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	4	4	1	48	13

* Indicates less than 1%
Note: Columns may not add to 100 due to rounding

TABLE 16

SPECIALTY JOB COMPARISON BETWEEN CURRENT AND 2000 SURVEYS

PRESENT SURVEY (N=581)		**2000 SURVEY (N=537)**	
		INDUSTRIAL HYGIENE CLUSTER*	67%
INDUSTRIAL HYGIENE INDEP JOB	60%	Industrial Hygiene Job	
		Entry-level Industrial Hygiene Job*	
CHEMICAL HAZARDS INDEP JOB	1%	Hazardous Materials Job	
		Quality Control Job*	
RESPIRATORY PROTECTION INDEP JOB	1%	Respiratory Protection Program Manager Job	
ENVIRONMENTAL MONITORING CLUSTER	11%	ENVIRONMENTAL MONITORING CLUSTER	5%
Environmental Protection Job		Environmental Protection Job	
Entry-Level Water Protection Job		Entry-Level Water Program Job	
Environmental Protection NCOIC Job*			
ENTRY-LEVEL WATER ANALYSIS INDEP JOB*	3%		
RADIOLOGICAL HEALTH PROG INDEP JOB*	1%		
TLD PROGRAM INDEP JOB*	1%		
MANAGEMENT INDEP JOB	9%	MANAGEMENT CLUSTER	10%
		Supervisor Job*	
		Resource Management Job*	
TRAINER INDEP JOB*	1%		
		EQUIPMENT INDEP JOB*	2%
		READINESS JOB*	2%

* Indicates cluster/job found in current study and not found in previous study (or vice-versa).

TABLE 17

DISTRIBUTION OF AFSC 4B0X1 SKILL-LEVEL MEMBERS
ACROSS CAREER LADDER JOBS (PERCENT IN EACH JOB)

	4B031 (N=146)	4B051 (N=237)	4B071 (N=182)	4B091 (N=15)
INDUSTRIAL HYGIENE INDEP JOB	50	67	62	20
ENVIRONMENTAL MONITORING CLUSTER	21	11	3	*
ENTRY-LEVEL WATER HAZARDS INDEP JOB	10	*	*	*
CHEMICAL HAZARDS INDEP JOB	1	1	*	*
RADIOLOGICAL HEALTH PROGRAM INDEP JOB	1	1	*	*
RESPIRATORY PROTECTION INDEP JOB	1	*	2	*
THERMOLUMINESCENT DOSIMETER PROGAM INDEP JOB	3	*	*	*
MANAGEMENT INDEP JOB	*	3	19	67
TRAINER INDEP JOB	*	*	3	*
NOT GROUPED	13	15	11	13

* Indicates less than 1%
Note: Columns may not add to 100 due to rounding

TABLE 18

TIME SPENT ON DUTIES BY MEMBERS OF AFSC 4B0X1 SKILL-LEVEL GROUPS
(PERCENT RESPONDING)

DUTIES		4B031 (N=146)	4B051 (N=237)	4B071 (N=182)	4B091 (N=15)
A	MONITORING DRINKING WATER, SWIMMING POOLS, OR SPAS	22	8	5	3
B	PERFORMING ENVIRONMENTAL MONITORING	8	6	5	2
C	PERFORMING INDUSTRIAL HYGIENE ACTIVITIES	47	47	30	9
D	PERFORMING RADIOLOGICAL HEALTH PROGRAM ACTIVITIES	7	7	6	2
E	PERFORMING OR PRACTICING PEACETIME DISASTER OPERATIONS	1	2	2	3
F	PERFORMING OR PRACTICING WARTIME DISASTER OPERATIONS	4	5	7	8
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	1	1	3	3
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	4	4	4	4
I	PERFORMING MEDICAL READINESS ACTIVITIES	2	3	4	4
J	PERFORMING TRAINING ACTIVITIES	1	6	10	10
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	3	11	25	53

Note: Columns may not add to 100 due to rounding

TABLE 19

TIME SPENT ON DUTIES BY AD MEMBERS OF AFSC 4B0X1 SKILL-LEVEL GROUPS
(PERCENT RESPONDING)

	DUTIES	AD 4B031 (N=146)	AD 4B051 (N=227)	AD 4B071 (N=94)	AD 4B091 (N=15)
A	MONITORING DRINKING WATER, SWIMMING POOLS, OR SPAS	22	8	5	3
B	PERFORMING ENVIRONMENTAL MONITORING	8	6	4	2
C	PERFORMING INDUSTRIAL HYGIENE ACTIVITIES	47	48	24	9
D	PERFORMING RADIOLOGICAL HEALTH PROGRAM ACTIVITIES	7	7	4	2
E	PERFORMING OR PRACTICING PEACETIME DISASTER OPERATIONS	1	2	3	3
F	PERFORMING OR PRACTICING WARTIME DISASTER OPERATIONS	4	5	6	8
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	1	1	3	3
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	4	4	4	4
I	PERFORMING MEDICAL READINESS ACTIVITIES	2	3	4	4
J	PERFORMING TRAINING ACTIVITIES	1	6	11	10
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	3	11	33	53

Note: Columns may not add to 100 due to rounding

TABLE 20

REPRESENTATIVE TASKS PERFORMED BY AD DAFSC 4B031 PERSONNEL

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 80*	PERCENT MEMBERS PERFORMING (N=146)
C0154	Perform quantitative fit-testings, such as port-a-count, other than gas masks	75
C0130	Verify chemical inventories	71
A0021	Perform pH analyses	70
C0161	Perform sound-level measurements, such as dBA or dBC	69
A0019	Perform chlorine analyses	68
C0163	Perform noise dosimetry surveys	67
A0023	Collect potable water samples for bacterial analyses	64
C0104	Conduct opening and closing conferences	64
C0129	Evaluate shop hazardous communication (HAZCOM) programs	64
C0142	Perform routine ventilation surveys	64
C0106	Brief shop personnel on chemical, biological, or physical hazards	64
C0159	Identify hazardous noise sources	64
C0105	Interview shop personnel	63
C0121	Research and interpret material safety data sheets (MSDSs)	60
F0258	Perform fit testings for chemical warfare masks	59
C0125	Evaluate chemical inhalation hazards	58
C0120	Identify chemical inhalation hazards	58
C0119	Identify chemical contact or absorption hazards	58
A0026	Prepare water samples for shipment	57
A0027	Transport water samples	56
C0107	Record results of activity based surveys, such as data entry into Command Core System	55
B0058	Collect bulk environmental samples, such as air, soil, paint, asbestos, or hazardous waste	55
C0124	Evaluate chemical contact or absorption hazards	55
A0030	Document results of analyses	54
C0169	Verify adequacy of hearing protection devices	54
C0162	Perform octave-band noise surveys	54
A0013	Collect water samples from swimming pools, hot tubs, or spas	53
C0150	Determine or establish personal protective equipment (PPE) controls for chemical hazards	53
C0141	Perform initial ventilation surveys	53
C0171	Identify and establish hazardous noise areas	53
C0126	Determine or establish administrative controls for chemical hazards	53
C0152	Conduct RP training	50
C0108	Prepare activity based survey reports	50
C0135	Collect breathing zone air samples for compliance	49
C0143	Perform baseline ventilation surveys	49
A0011	Perform preseason inspections of swimming pools, hot tubs, or spas	48
C0127	Determine or establish engineering controls for chemical hazards	48
C0115	Evaluate workplace for pregnant worker exposures	47
C0176	Identify ergonomic hazards	47
C0167	Evaluate results of noise measurements	47
A0029	Perform bacteriological analyses of water with presence-absence technique	46
C0138	Interpret IH air sampling results	46
C0136	Collect breathing zone air samples for screening	46

TABLE 21

REPRESENTATIVE TASKS PERFORMED BY AD DAFSC 4B051 PERSONNEL

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 110*	PERCENT MEMBERS PERFORMING (N=227)
C0105	Interview shop personnel	76
C0121	Research and interpret material safety data sheets (MSDSs)	76
C0130	Verify chemical inventories	75
C0129	Evaluate shop hazardous communication (HAZCOM) programs	75
C0161	Perform sound-level measurements, such as dBA or dBC	75
C0104	Conduct opening and closing conferences	74
C0106	Brief shop personnel on chemical, biological, or physical hazards	72
C0125	Evaluate chemical inhalation hazards	72
C0124	Evaluate chemical contact or absorption hazards	71
C0163	Perform noise dosimetry surveys	71
C0120	Identify chemical inhalation hazards	70
C0159	Identify hazardous noise sources	70
C0142	Perform routine ventilation surveys	70
C0126	Determine or establish administrative controls for chemical hazards	68
C0169	Verify adequacy of hearing protection devices	67
C0135	Collect breathing zone air samples for compliance	67
C0138	Interpret IH air sampling results	67
C0154	Perform quantitative fit-testings, such as port-a-count, other than gas masks	66
C0119	Identify chemical contact or absorption hazards	66
C0150	Determine or establish personal protective equipment (PPE) controls for chemical hazards	66
C0171	Identify and establish hazardous noise areas	65
C0115	Evaluate workplace for pregnant worker exposures	65
C0167	Evaluate results of noise measurements	64
C0127	Determine or establish engineering controls for chemical hazards	64
C0131	Determine or establish air sampling strategies	64
F0258	Perform fit testings for chemical warfare masks	63
C0136	Collect breathing zone air samples for screening	63
C0134	Collect area air samples from industrial environments	62
C0139	Determine or establish follow-up actions for air sampling results	62
C0108	Prepare activity based survey reports	61
F0257	Don or doff PPE	61
J0358	Conduct OJT	60
C0111	Research Air Force, joint service, federal, state, or local IH standards	60
C0107	Record results of activity based surveys, such as data entry into Command Core System	59
C0155	Evaluate work areas for RP compliance	59
C0176	Identify ergonomic hazards	59
C0143	Perform baseline ventilation surveys	59
C0141	Perform initial ventilation surveys	59
C0137	Collect IH bulk or grab samples	59
C0101	Perform routine activity based surveillances	56
C0128	Determine or establish regulated areas for chemical hazards	56
C0178	Evaluate ergonomic hazards	54
C0114	Evaluate occupational illness or injury reports	54

TABLE 22

REPRESENTATIVE TASKS PERFORMED BY AD DAFSC 4B071 PERSONNEL

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 134*	PERCENT MEMBERS PERFORMING (N=94)
K0434	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	85
K0385	Counsel subordinates concerning personal matters	82
K0453	Write recommendations for awards or decorations	79
K0383	Conduct supervisory performance feedback sessions	74
K0420	Evaluate personnel for promotion, demotion, reclassification, or special awards	74
J0358	Conduct OJT	74
K0428	Interpret policies, directives, or procedures for subordinates	73
J0371	Maintain training records or files	72
K0427	Inspect personnel for compliance with military standards	72
K0449	Schedule personnel for TDY assignments, leaves, or passes	71
K0457	Write or indorse military performance reports or appraisals	70
K0378	Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	69
J0359	Counsel trainees on training progress	69
K0408	Establish performance standards for subordinates	69
K0425	Initiate actions required due to substandard performance of personnel	68
J0360	Determine training requirements	67
K0419	Evaluate personnel for compliance with performance standards	67
K0444	Plan or schedule work assignments or priorities	66
J0368	Evaluate progress of trainees	65
K0422	Evaluate work schedules	65
J0355	Brief personnel on training programs or matters	65
K0423	Evaluate workload requirements	64
K0382	Conduct supervisory orientations for newly assigned personnel	64
K0433	Participate in councils, boards, or committee meetings, such as base facility utilization boards or environmental protection committees	64
K0394	Develop or establish work schedules	61
K0380	Conduct self-inspections or self-assessments	61
J0367	Evaluate personnel to determine training needs	60
K0376	Assign personnel to work areas or duty positions	59
F0252	Research wartime reference materials	59
K0407	Establish organizational policies, such as OIs, or standard operating procedures (SOPs)	59
C0121	Research and interpret material safety data sheets (MSDSs)	59
C0111	Research Air Force, joint service, federal, state, or local IH standards	57
K0377	Assign sponsors for newly assigned personnel	57
F0257	Don or doff PPE	57
K0386	Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	55
J0362	Develop training programs, plans, or procedures	54
C0102	Review activity based survey data	54
K0411	Evaluate budget requirements	53
E0239	Determine PPE-type based on peacetime disaster operations	53
J0364	Develop or procure training materials or aids	52
K0393	Develop or establish work methods or procedures	52
C0150	Determine or establish personal protective equipment (PPE) controls for chemical hazards	52

C0100	Prioritize special activity based surveys	52
C0125	Evaluate chemical inhalation hazards	51

TABLE 23

REPRESENTATIVE TASKS PERFORMED BY AD DAFSC 4B091 PERSONNEL

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 107*	PERCENT MEMBERS PERFORMING (N=15)
K0434	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	93
K0378	Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	87
K0427	Inspect personnel for compliance with military standards	87
K0453	Write recommendations for awards or decorations	87
K0428	Interpret policies, directives, or procedures for subordinates	87
K0404	Draft budget requirements	87
K0403	Draft agenda for general meetings, such as staff meetings, briefings, conferences, or workshops	80
K0385	Counsel subordinates concerning personal matters	80
K0382	Conduct supervisory orientations for newly assigned personnel	80
K0420	Evaluate personnel for promotion, demotion, reclassification, or special awards	80
K0388	Develop organizational or functional charts	80
K0433	Participate in councils, boards, or committee meetings, such as base facility utilization boards or environmental protection committees	73
K0436	Plan briefings, conferences, or workshops	73
K0394	Develop or establish work schedules	73
K0444	Plan or schedule work assignments or priorities	73
K0392	Develop inputs to mobility, contingency, disaster preparedness, or unit emergency or alert plans	73
K0393	Develop or establish work methods or procedures	73
J0355	Brief personnel on training programs or matters	73
K0386	Determine or establish logistics requirements, such as personnel, equipment, tools, parts, supplies, or workspace	73
K0419	Evaluate personnel for compliance with performance standards	73
K0422	Evaluate work schedules	73
K0414	Evaluate job or position descriptions	73
J0367	Evaluate personnel to determine training needs	73
K0390	Develop self-inspection or self-assessment program checklists	73
K0408	Establish performance standards for subordinates	73
J0362	Develop training programs, plans, or procedures	73
K0452	Write job or position descriptions	73
K0446	Review expenditures	67
K0376	Assign personnel to work areas or duty positions	67
K0380	Conduct self-inspections or self-assessments	67
K0445	Review drafts of supplements or changes to directives, such as policy directives, instructions, or manuals	67
K0407	Establish organizational policies, such as OIs, or standard operating procedures (SOPs)	67
K0411	Evaluate budget requirements	67
K0412	Evaluate inspection report findings or inspection procedures	67
K0377	Assign sponsors for newly assigned personnel	67
K0449	Schedule personnel for TDY assignments, leaves, or passes	67
K0383	Conduct supervisory performance feedback sessions	67
K0415	Evaluate job-related suggestions	67

TABLE 24

TIME SPENT ON DUTIES BY ANG MEMBERS OF AFSC 4B0X1 SKILL-LEVEL GROUPS
(PERCENT RESPONDING)

	DUTIES	ANG 4B071 (N=76)
A	MONITORING DRINKING WATER, SWIMMING POOLS, OR SPAS	4
B	PERFORMING ENVIRONMENTAL MONITORING	6
C	PERFORMING INDUSTRIAL HYGIENE ACTIVITIES	37
D	PERFORMING RADIOLOGICAL HEALTH PROGRAM ACTIVITIES	9
E	PERFORMING OR PRACTICING PEACETIME DISASTER OPERATIONS	2
F	PERFORMING OR PRACTICING WARTIME DISASTER OPERATIONS	8
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	3
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	4
I	PERFORMING MEDICAL READINESS ACTIVITIES	4
J	PERFORMING TRAINING ACTIVITIES	8
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	16

Note: Column may not add to 100 due to rounding

TABLE 25

REPRESENTATIVE TASKS PERFORMED BY ANG DAFSC 4B071 PERSONNEL

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 201*	PERCENT MEMBERS PERFORMING (N=76)
C0105	Interview shop personnel	92
C0106	Brief shop personnel on chemical, biological, or physical hazards	88
C0121	Research and interpret material safety data sheets (MSDSs)	86
C0159	Identify hazardous noise sources	86
F0258	Perform fit testings for chemical warfare masks	84
C0104	Conduct opening and closing conferences	84
K0434	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	84
C0161	Perform sound-level measurements, such as dBA or dBC	84
C0130	Verify chemical inventories	83
C0129	Evaluate shop hazardous communication (HAZCOM) programs	82
F0257	Don or doff PPE	82
C0125	Evaluate chemical inhalation hazards	80
C0150	Determine or establish personal protective equipment (PPE) controls for chemical hazards	80
C0163	Perform noise dosimetry surveys	80
I0341	Administer or practice cardiopulmonary resuscitation (CPR)	80
C0126	Determine or establish administrative controls for chemical hazards	79
C0154	Perform quantitative fit-testings, such as port-a-count, other than gas masks	78
C0101	Perform routine activity based surveillances	78
C0142	Perform routine ventilation surveys	78
C0124	Evaluate chemical contact or absorption hazards	78
C0111	Research Air Force, joint service, federal, state, or local IH standards	78
C0155	Evaluate work areas for RP compliance	78
C0138	Interpret IH air sampling results	78
C0137	Collect IH bulk or grab samples	78
H0310	Inventory equipment, tools, parts, or supplies	78
C0108	Prepare activity based survey reports	76
C0135	Collect breathing zone air samples for compliance	76
C0122	Approve chemical supply issues at Hazardous Material (HAZMAT) pharmacy	76
C0120	Identify chemical inhalation hazards	76
C0151	Select respiratory protection (RP) equipment	76
C0103	Create, construct, or maintain activity based surveillance data	75
C0131	Determine or establish air sampling strategies	75
C0127	Determine or establish engineering controls for chemical hazards	75
C0167	Evaluate results of noise measurements	75
C0143	Perform baseline ventilation surveys	75
C0102	Review activity based survey data	74
C0119	Identify chemical contact or absorption hazards	74
C0134	Collect area air samples from industrial environments	74
C0171	Identify and establish hazardous noise areas	74
I0340	Perform self-aid buddy care (SABC) procedures	74
C0152	Conduct RP training	72
C0136	Collect breathing zone air samples for screening	72
C0139	Determine or establish follow-up actions for air sampling results	72

TABLE 26

TIME SPENT ON DUTIES BY AFRC MEMBERS OF AFSC 4B0X1 SKILL-LEVEL GROUPS
(PERCENT RESPONDING)

DUTIES		AFRC 4B051 (N=8)	AFRC 4B071 (N=12)
A	MONITORING DRINKING WATER, SWIMMING POOLS, OR SPAS	8	5
B	PERFORMING ENVIRONMENTAL MONITORING	3	3
C	PERFORMING INDUSTRIAL HYGIENE ACTIVITIES	31	37
D	PERFORMING RADIOLOGICAL HEALTH PROGRAM ACTIVITIES	6	3
E	PERFORMING OR PRACTICING PEACETIME DISASTER OPERATIONS	4	2
F	PERFORMING OR PRACTICING WARTIME DISASTER OPERATIONS	8	8
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	2	2
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	2	2
I	PERFORMING MEDICAL READINESS ACTIVITIES	7	10
J	PERFORMING TRAINING ACTIVITIES	9	13
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	20	15

TABLE 27

REPRESENTATIVE TASKS PERFORMED BY AFRC DAFSC 4B051 PERSONNEL

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 112*	PERCENT MEMBERS PERFORMING (N=8)
C0154	Perform quantitative fit-testings, such as port-a-count, other than gas masks	75
K0434	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	75
J0364	Develop or procure training materials or aids	63
C0106	Brief shop personnel on chemical, biological, or physical hazards	63
K0424	Implement safety or security programs	63
C0161	Perform sound-level measurements, such as dBA or dBC	63
C0105	Interview shop personnel	50
C0104	Conduct opening and closing conferences	50
F0257	Don or doff PPE	50
F0285	Perform plottings for biological warfare hazards	50
F0286	Perform plottings for chemical warfare hazards	50
C0130	Verify chemical inventories	50
J0360	Determine training requirements	50
K0436	Plan briefings, conferences, or workshops	50
I0341	Administer or practice cardiopulmonary resuscitation (CPR)	50
K0444	Plan or schedule work assignments or priorities	50
C0171	Identify and establish hazardous noise areas	50
C0119	Identify chemical contact or absorption hazards	50
G0309	Compile data for records, reports, logs, or trend analyses	50
K0379	Conduct safety inspections of equipment or facilities	50
C0142	Perform routine ventilation surveys	50
E0247	Collect samples for identification or hazardous classification of potential hazards, such as air and water	50
J0367	Evaluate personnel to determine training needs	50
J0370	Inspect training materials or aids for operation or suitability	50
K0380	Conduct self-inspections or self-assessments	50
C0159	Identify hazardous noise sources	50
C0152	Conduct RP training	50
C0167	Evaluate results of noise measurements	50
F0256	Conduct NBC agents training for medical personnel	38
G0308	Write minutes of briefings, conferences, or meetings	38
D0220	Exchange TLDs	38
I0339	Perform unexploded ordnance (UXO) sweeps	38
D0221	Evaluate storage of TLDs	38
K0433	Participate in councils, boards, or committee meetings, such as base facility utilization boards or environmental protection committees	38
K0385	Counsel subordinates concerning personal matters	38
K0428	Interpret policies, directives, or procedures for subordinates	38
J0363	Develop written tests	38
C0102	Review activity based survey data	38
C0101	Perform routine activity based surveillances	38
C0103	Create, construct, or maintain activity based surveillance data	38
K0378	Conduct general meetings, such as staff meetings, briefings, conferences, or workshops	38
J0362	Develop training programs, plans, or procedures	38

TABLE 28

REPRESENTATIVE TASKS PERFORMED BY AFRC DAFSC 4B071 PERSONNEL

TASKS	*AVERAGE NUMBER OF TASKS PERFORMED 109*	PERCENT MEMBERS PERFORMING (N=12)
C0105	Interview shop personnel	83
C0106	Brief shop personnel on chemical, biological, or physical hazards	83
J0358	Conduct OJT	75
F0258	Perform fit testings for chemical warfare masks	75
J0371	Maintain training records or files	75
C0104	Conduct opening and closing conferences	75
C0109	Perform administrative area surveys	75
C0129	Evaluate shop hazardous communication (HAZCOM) programs	75
C0151	Select respiratory protection (RP) equipment	75
C0120	Identify chemical inhalation hazards	75
C0115	Evaluate workplace for pregnant worker exposures	75
C0154	Perform quantitative fit-testings, such as port-a-count, other than gas masks	75
C0121	Research and interpret material safety data sheets (MSDSs)	75
C0119	Identify chemical contact or absorption hazards	75
C0130	Verify chemical inventories	75
F0257	Don or doff PPE	67
I0340	Perform self-aid buddy care (SABC) procedures	67
C0163	Perform noise dosimetry surveys	67
J0368	Evaluate progress of trainees	67
J0367	Evaluate personnel to determine training needs	67
J0360	Determine training requirements	67
C0111	Research Air Force, joint service, federal, state, or local IH standards	67
C0171	Identify and establish hazardous noise areas	67
C0167	Evaluate results of noise measurements	67
C0124	Evaluate chemical contact or absorption hazards	67
C0150	Determine or establish personal protective equipment (PPE) controls for chemical hazards	67
C0125	Evaluate chemical inhalation hazards	67
C0152	Conduct RP training	67
K0434	Participate in general meetings, such as staff meetings, briefings, conferences, or workshops, other than conducting	58
I0341	Administer or practice cardiopulmonary resuscitation (CPR)	58
J0359	Counsel trainees on training progress	58
J0372	Personalize lesson plans	58
C0101	Perform routine activity based surveillances	58
C0159	Identify hazardous noise sources	58
J0366	Evaluate effectiveness of training programs, plans, or procedures	58
J0370	Inspect training materials or aids for operation or suitability	58
J0364	Develop or procure training materials or aids	58
J0365	Establish or maintain study reference files	58
J0362	Develop training programs, plans, or procedures	58
C0127	Determine or establish engineering controls for chemical hazards	58
C0126	Determine or establish administrative controls for chemical hazards	58
I0332	Maintain personal mobility bags or kits	50
K0380	Conduct self-inspections or self-assessments	50
I0343	Load or unload patients on patient transportation vehicles	50

TABLE 29

PERCENT TIME SPENT ON DUTIES BY 4B0X1
FIRST-ENLISTMENT PERSONNEL (1–48 MONTHS' TAFMS)

DUTIES		1-48 MONTHS' TAFMS (N=177)
A	MONITORING DRINKING WATER, SWIMMING POOLS, OR SPAS	19
B	PERFORMING ENVIRONMENTAL MONITORING	7
C	PERFORMING INDUSTRIAL HYGIENE ACTIVITIES	49
D	PERFORMING RADIOLOGICAL HEALTH PROGRAM ACTIVITIES	7
E	PERFORMING OR PRACTICING PEACETIME DISASTER OPERATIONS	2
F	PERFORMING OR PRACTICING WARTIME DISASTER OPERATIONS	5
G	PERFORMING GENERAL ADMINISTRATIVE AND TECHNICAL ORDER (TO) SYSTEM ACTIVITIES	1
H	PERFORMING GENERAL SUPPLY AND EQUIPMENT ACTIVITIES	4
I	PERFORMING MEDICAL READINESS ACTIVITIES	2
J	PERFORMING TRAINING ACTIVITIES	1
K	PERFORMING MANAGEMENT AND SUPERVISORY ACTIVITIES	3

TABLE 30

REPRESENTATIVE TASKS PERFORMED BY AFSC 4B0X1
FIRST-ENLISTMENT PERSONNEL (1–48 MONTHS' TAFMS)

TASKS	*Average number of tasks performed 81*	PERCENT MEMBERS PERFORMING (N=177)
C0154	Perform quantitative fit-testings, such as port-a-count, other than gas masks	75
C0161	Perform sound-level measurements, such as dBA or dBC	72
C0130	Verify chemical inventories	71
C0163	Perform noise dosimetry surveys	69
C0142	Perform routine ventilation surveys	67
C0159	Identify hazardous noise sources	67
A0021	Perform pH analyses	66
C0104	Conduct opening and closing conferences	66
A0019	Perform chlorine analyses	65
C0105	Interview shop personnel	65
C0129	Evaluate shop hazardous communication (HAZCOM) programs	65
C0106	Brief shop personnel on chemical, biological, or physical hazards	63
A0023	Collect potable water samples for bacterial analyses	61
C0121	Research and interpret material safety data sheets (MSDSs)	60
C0125	Evaluate chemical inhalation hazards	60
F0258	Perform fit testings for chemical warfare masks	59
C0124	Evaluate chemical contact or absorption hazards	59
C0120	Identify chemical inhalation hazards	59
C0119	Identify chemical contact or absorption hazards	59
C0169	Verify adequacy of hearing protection devices	58
C0171	Identify and establish hazardous noise areas	58
C0107	Record results of activity based surveys, such as data entry into Command Core System	55
C0162	Perform octave-band noise surveys	55
C0126	Determine or establish administrative controls for chemical hazards	55
C0141	Perform initial ventilation surveys	54
C0152	Conduct RP training	53
A0026	Prepare water samples for shipment	53
C0135	Collect breathing zone air samples for compliance	53
C0150	Determine or establish personal protective equipment (PPE) controls for chemical hazards	52
C0167	Evaluate results of noise measurements	52
A0027	Transport water samples	51
A0030	Document results of analyses	51
B0058	Collect bulk environmental samples, such as air, soil, paint, asbestos, or hazardous waste	51
C0108	Prepare activity based survey reports	51
C0143	Perform baseline ventilation surveys	51
C0134	Collect area air samples from industrial environments	50
C0138	Interpret IH air sampling results	50
C0127	Determine or establish engineering controls for chemical hazards	50
C0137	Collect IH bulk or grab samples	50
C0115	Evaluate workplace for pregnant worker exposures	49
A0013	Collect water samples from swimming pools, hot tubs, or spas	49

TABLE 31

SUPPORT EQUIPMENT USED OR OPERATED BY
FIRST-ENLISTMENT AFSC 4B0X1 PERSONNEL
(PERCENT USING OR OPERATING)

SUPPORT EQUIPMENT	(N=177)
Calculators	84
Dosimeters, Noise	81
Quantitative Fit test Machines, Portacount	79
Air Sampling Pumps	78
Cameras, Digital	72
Wet Bulb Temperature Instruments	72
Test Kits, Chlorine pH	71
Air Sampling Sorbent Tubes, such as Charcoal Tubes	68
Computer Equipment	68
Bacteriological Water Kits	67
Personal Protective Equipment, Peacetime	65
Analyzers, Octave Band Noise	62
Meters, Sound Level	59
Air Sampling Filters	58
Samplers, Air	56
Sound Level Calipers	56
Detector Tubes	54
Dosimeters, Thermoluminescent	53
Samplers, Water	53
Chemical Agent Detector Paper, M-8	51
Chemical Agent Detector Paper, M-9	51
Filters, Membrane	51
Meters, pH	50
Flow Calibrators	49
Meters, Indoor Air Quality	48
Stop Watches	47
Black lights	46
Generators, Portable	46
Chem Spec Sensors, i.e. Carb Monoxide/Hydrogen Sulfide	45
Meters, Narda Radio Frequency (RF) Survey	45
Chem Agent Monitors (CAMs)	44
Combustible Gas Indicators	44
Elec Samp Pump Calibrators, i.e. Gilibrators/Minibucks	44
Analyzers, Impact Noise	42
Land Mobile Radio (LMR) Equipment	42
Meters, Carbon Monoxide	42
Personal Protective Equipment, Wartime	42
Meters, Radiac Multifunction Survey ADM-300	41
Test Strips, pH or Clorine	41
Test Kits, Fluoride	40

TABLE 32

SOFTWARE/SYSTEMS USED OR OPERATED BY
FIRST-ENLISTMENT AFSC 4B0X1 PERSONNEL
(PERCENT USING OR OPERATING)

SOFTWARE PROGRAMS	(N=177)
Command Core Systems	75
Environmental Management Information System (EMIS)	59
DoD Hazardous Materials Information System (HMIS)	58
Portacount Software, such as Fit Plus and QNFT	58
Noise Dosimetry Software	49
OSHA Internet Site	49
Armstrong Laboratory Sample Guide	29

TABLE 33

FORMS USED BY
FIRST-ENLISTMENT AFSC 4B0X1 PERSONNEL
(PERCENT USING)

FORMS	(N=177)
AF 2756, Noise Survey - Dosimetry	75
AF 2750, Industrial Hygiene Sampling Data	68
AF 2755, Master workplace Exposure Data Summary	68
AF 2758, Industrial Hygiene Survey Data Sheet	65
AF 2772, Certificate of Respirator Fit Test	63
AF 2754, Chronological Record of Workplace Surveillance	61
AF 2761, Hazardous Materials Data	54
DD 2214, Noise Survey	54
AF 55, Employee Safety and Health Record	53
AF 2763, Industrial Hygiene Ventilation Presurvey	49
AF 2751, Bulk Material Sampling Data	47
AF 190, Occupational Illness/Injury Report	46
AF 2752, Environmental Sampling Data	45
AF 2762, Listing of Industrial Hygiene Sample Results	44
AF 3952, Chemical HAZMAT Material Request/Authorization	44
AF 2764, Industrial Ventilation Survey Pitot Velocity method	40
AF 2757, Illumination Survey Data Sheet	38
AF 2767, Occupational Hlth Trng & Protective Equip Fit Testing	38
AF 2773, Respirator Selection Worksheet	38
AF 2765, Industrial Ventilation Survey Pitot Traverse	34
Listing 1523, Dosimetry Data	33
AF 1024, Confined Spaces Entry Permit	30

TABLE 34

AFSC 4B0X1 TASKS WITH HIGHEST TRAINING EMPHASIS RATINGS

TASKS		TNG EMP*	PERCENT MEMBERS PERFORMING 1-24 MOS TAFMS	PERCENT MEMBERS PERFORMING 1-48 MOS TAFMS	TSK DIF
C0154	Perform quantitative fit-testings, such as port-a count, other than gas masks	6.83	69	75	4.21
C0163	Perform noise dosimetry surveys	6.51	59	69	4.33
C0135	Collect breathing zone air samples for compliance	6.47	41	53	4.79
F0258	Perform fit testing for chemical warfare masks	6.47	52	67	4.81
C0101	Perform routine ventilation surveys	6.40	36	44	5.20
C0137	Collect IH bulk or grab samples	6.30	38	50	4.21
C0136	Collect breathing zone air samples for screening	6.30	36	49	4.75
F0273	Operate NBC agent detection equipment	6.23	16	28	5.22
C0161	Perform sound level measurements, such as dBA or dBC	6.21	67	72	3.94
C0120	Identify chemical inhalation hazards	6.19	41	59	5.00
C0107	Record results of activity based surveys, such as data entry into Command Core System	6.17	40	55	5.82
C0138	Interpret IH air sampling results	6.15	38	50	5.54
C0159	Identify hazardous noise sources	6.13	57	67	4.10
F0257	Don or doff PPE	6.11	31	46	3.68
C0121	Research and interpret material safety data sheets (MSDS)	6.06	52	60	4.34
F0272	Assist in identifying NBC warfare agents	6.04	16	24	5.57
C0119	Identify chemical contact or absorption hazards	6.00	41	59	4.99
F0267	Determine field water potability	5.98	16	19	4.90
C0125	Evaluate chemical inhalation hazards	5.96	43	60	5.08
C0134	Collect area air samples from industrial environments	5.94	38	50	4.68
C0143	Perform baseline ventilation surveys	5.89	36	51	5.78

* TE MEAN = 2.82; S.D. = 1.68; HIGH = 4.50

TABLE 35

AFSC 4B0X1 TASKS WITH HIGHEST TASK DIFFICULTY RATINGS

TASKS		TSK DIF*	PERCENT MEMBERS PERFORMING 1-24 MOS TAFMS	1-48 MOS TAFMS	3-SKL LVL	5-SKL LVL	7-SKL LVL	TRG EMP
C0140	Review ventilation system design blueprints	7.04	22	18	19	17	17	1.43
D0204	Calculate radiation intensities	6.85	9	7	7	12	16	2.96
D0203	Monitor radioisotope permit programs	6.83	7	5	6	7	14	1.21
D0201	Investigate suspected laser overexposures	6.82	7	7	7	7	11	1.87
D0196	Investigate suspected RFR overexposures	6.80	7	12	10	19	20	1.89
D0199	Perform laser theoretical hazard (LHAZ) evaluations	6.75	7	6	7	10	17	2.47
D0191	Calculate RFR permissible exposure limits (PELs)	6.72	10	15	15	26	24	3.60
C0110	Write base industrial hygiene related regulations, such as radiation, thermal stress, or respiratory protection	6.70	14	18	16	40	39	1.60
C0118	Review project and construction plans for environmental or health hazard implications	6.69	2	6	5	17	34	1.09
E0234	Develop peace time disaster response plans	6.68	3	7	6	13	45	0.98
F0285	Perform plottings for biological warfare hazards	6.67	12	20	18	22	24	3.13
F0284	Perform nuclear detonation plottings for radiological contamination distribution	6.66	9	15	14	21	26	3.00
D0192	Calculate RFR hazards distances	6.65	12	17	16	27	23	3.72
D0227	Investigate or evaluate radiation accidents, such as laboratory spills	6.64	9	7	7	5	13	1.43
D0218	Determine or establish radiation doses or dose rates	6.62	14	15	13	12	14	2.34
D0230	Coordinate disposal methods for radioactive waste with Air Force Radioactive and Mixed Waste (AFRMW) office	6.59	5	3	3	7	16	1.00
F0253	Develop wartime disaster response plan	6.59	2	6	5	15	48	0.83
D0229	Coordinate special radiological studies with AF consulting agencies	6.57	3	3	3	4	13	0.81

* TD MEAN = 5.00; S.D. = 1.00; HIGH = 6.00

TABLE 36

EXAMPLES OF STS ELEMENTS NOT SUPPORTED BY SURVEY DATA
(LESS THAN 20 PERCENT MEMBERS PERFORMING)

UNIT	LEARNING OBJECTIVE	PROF CODE	PERCENT MEMBERS PERFORMING 1ST JOB (N=58)	1ST ENL (N=177)	TRG EMP	TSK DIF	ATI
4.7.11	Perform speech interference level surveys	1a					
Task	C0165. Perform speech interference level (PSIL) surveys		9	10	2.53	5.50	2
4.13.4	Inventory radioactive material sources	1a					
Task	D0205. Inventory radioactive material sources		9	11	3.30	5.68	7
4.25.3	Collect biological or bio-aerosol samples for indoor air quality (IAQ)	2b					
Task	C0148. Collect biological or bio-aerosol samples for indoor air quality (IAQ)		12	11	2.91	6.09	7

* Mean TE Rating = 2.82 Standard Deviation = 1.68 High TE = 4.50
* Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD = 6.00
*

TABLE 37

EXAMPLES OF TASKS NOT REFERENCED TO STS ELEMENTS
WITH 20 PERCENT OR MORE MEMBERS PERFORMING

TASKS		TNG EMP	1ST JOB (N=58)	1ST ENL (N=177)	TSK DIF	ATI
D0221	Evaluate storage of TLDs	5.30	40	36	3.26	10

* Mean TE Rating = 2.82 Standard Deviation = 1.68 High TE = 4.50
** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD = 6.00

TABLE 38

EXAMPLES OF STS ELEMENTS WITHOUT PROFICIENCY CODES MATCHED TO TASKS
WITH 20 PERCENT OR MORE MEMBERS PERFORMING

			PERCENT MEMBERS PERFORMING				
UNIT	LEARNING OBJECTIVE	PROF CODE	1ST JOB (N=58)	1ST ENL (N=177)	TRG EMP	TSK DIF	ATI
4.2.13	Prepare activity based survey reports	-					
Task	C0108. Prepare activity based survey reports		38	51	5.83	5.21	18
4.5.10	Research and interpret material safety data sheets (MSDS)	-					
Task	C0121. Research and interpret material safety data sheets (MSDS)		52	60	6.06	4.34	18

* Mean TE Rating = 2.82 Standard Deviation = 1.68 High TE = 4.50
** Mean TD Rating = 5.00 Standard Deviation = 1.00 High TD = 6.00

TABLE 39

AD JOB SATISFACTION INDICATORS FOR
IDENTIFIED JOB GROUPS
(PERCENT MEMBERS RESPONDING)

	INDUSTRIAL HYGIENE INDEP JOB (N=275) (STG 81)	ENVIRON MONITORING CLUSTER (N=62) (STG 43)	ENTRY-LVL WATER ANALYSIS INDEP JOB (N=15) (STG 65)	CHEMICAL HAZARDS INDEP JOB (N=5) (STG 79)	RADIOLOGICAL HEALTH PROGRAM INDEP JOB (N=6) (STG 144)	TLD PROGRAM INDEP JOB (N=5) (STG 139)
EXPRESSED JOB INTEREST						
INTERESTING	75	63	60	80	67	80
SO-SO	17	19	20	0	0	0
DULL	8	18	20	20	33	20
PERCEIVED USE OF TALENTS						
EXCELLENT TO PERFECT	16	6	0	0	17	0
FAIRLY WELL TO VERY WELL	71	73	87	80	33	80
NONE TO VERY LITTLE	13	21	13	20	50	20
PERCEIVED USE OF TRAINING						
EXCELLENT TO PERFECT	14	9	13	20	0	0
FAIRLY WELL TO VERY WELL	77	73	80	80	100	100
NONE TO VERY LITTLE	9	18	7	0	0	0
SENSE OF ACCOMPLISHMENT FROM JOB						
SATISFIED	69	63	53	80	67	80
NEUTRAL	8	21	20	0	0	0
DISSATISFIED	23	16	27	20	33	20
REENLISTMENT INTENTIONS						
YES OR PROBABLY YES	63	50	27	80	50	0
NO OR PROBABLY NO	30	42	73	0	33	100

WILL RETIRE	7	8	0	20	17	0

TABLE 39 (CONTINUED)

AD JOB SATISFACTION INDICATORS FOR
IDENTIFIED JOB GROUPS
(PERCENT MEMBERS RESPONDING)

	MGMT INDEP JOB (N=43) (STG 57)	TRAINER INDEP JOB (N=6) (STG 72)
EXPRESSED JOB INTEREST		
INTERESTING	81	66
SO-SO	12	17
DULL	7	17
PERCEIVED USE OF TALENTS		
EXCELLENT TO PERFECT	28	17
FAIRLY WELL TO VERY WELL	58	50
NONE TO VERY LITTLE	14	33
PERCEIVED USE OF TRAINING		
EXCELLENT TO PERFECT	16	17
FAIRLY WELL TO VERY WELL	63	66
NONE TO VERY LITTLE	21	17
SENSE OF ACCOMPLISHMENT FROM JOB		
SATISFIED	63	67
NEUTRAL	7	0
DISSATISFIED	30	33
REENLISTMENT INTENTIONS		
YES OR PROBABLY YES	42	33
NO OR PROBABLY NO	14	33
WILL RETIRE	44	34

TABLE 40

COMPARISON OF JOB SATISFACTION INDICATORS FOR AD AFSC 4B0X1
AND COMPARATIVE SAMPLE* GROUP
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS' TAFMS		49-96 MONTHS' TAFMS		97+ MONTHS' TAFMS	
	2002 4B0X1 (N=177)	COMP SAMPLE (N=444)	2002 4B0X1 (N=107)	COMP SAMPLE (N=306)	2002 4B0X1 (N=199)	COMP SAMPLE (N=661)
EXPRESSED JOB INTEREST						
INTERESTING	67	80	71	76	79	82
SO-SO	15	10	20	14	13	12
DULL	18	10	9	10	8	6
PERCEIVED USE OF TALENTS						
EXCELLENT TO PERFECT	10	18	13	19	20	25
FAIRLY WELL TO VERY WELL	70	62	72	64	67	63
NONE TO VERY LITTLE	20	20	15	17	13	12
PERCEIVED USE OF TRAINING						
EXCELLENT TO PERFECT	14	26	10	23	16	26
FAIRLY WELL TO VERY WELL	77	59	79	62	70	59
NONE TO VERY LITTLE	9	15	11	15	14	15
SENSE OF ACCOMPLISHMENT FROM JOB						
SATISFIED	61	72	65	72	71	79
NEUTRAL	14	11	12	10	6	8
DISSATISFIED	25	17	23	18	23	13
REENLISTMENT INTENTIONS						
YES OR PROBABLY YES	49	50	63	62	63	60
NO OR PROBABLY NO	51	46	36	32	10	7
WILL RETIRE	0	4	1	6	27	33

* Comparative sample of Medical and Dental AFSC 4XXXX career fields surveyed in last 12 months: 4C0X1, 4M0X1, 4N1X1, 4V0X1, 4Y0X2

TABLE 41

JOB SATISFACTION INDICATORS FOR
AD, ANG, AND AFRC MEMBERS
(PERCENT MEMBERS RESPONDING)

	AD (N=483)	ANG (N=78)	AFRC (N=20)
EXPRESSED JOB INTEREST			
INTERESTING	73	87	75
SO-SO	15	8	10
DULL	12	5	15
PERCEIVED USE OF TALENTS			
EXCELLENT TO PERFECT	15	25	20
FAIRLY WELL TO VERY WELL	69	65	50
NONE TO VERY LITTLE	16	10	30
PERCEIVED USE OF TRAINING			
EXCELLENT TO PERFECT	14	23	15
FAIRLY WELL TO VERY WELL	75	67	65
NONE TO VERY LITTLE	11	10	20
SENSE OF ACCOMPLISHMENT FROM JOB			
SATISFIED	66	72	40
NEUTRAL	10	12	35
DISSATISFIED	24	16	25

TABLE 42

COMPARISON OF AD JOB SATISFACTION INDICATORS
BETWEEN CURRENT AND 2000 SURVEYS
(PERCENT MEMBERS RESPONDING)

	1-48 MONTHS' TAFMS		49-96 MONTHS' TAFMS		97+ MONTHS' TAFMS	
	2002 4B0X1 (N=177)	2000 4B0X1 (N=174)	2002 4B0X1 (N=107)	2000 4B0X1 (N=97)	2002 4B0X1 (N=199)	2000 4B0X1 (N=167)
EXPRESSED JOB INTEREST						
INTERESTING	67	77	71	66	79	87
SO-SO	15	14	20	14	13	8
DULL	18	9	9	20	8	5
PERCEIVED USE OF TALENTS						
EXCELLENT TO PERFECT	10	*	13	*	20	*
FAIRLY WELL TO VERY WELL	70	79	72	77	67	92
NONE TO VERY LITTLE	20	21	15	23	13	8
PERCEIVED USE OF TRAINING						
EXCELLENT TO PERFECT	14	*	10	*	16	*
FAIRLY WELL TO VERY WELL	77	90	79	89	70	88
NONE TO VERY LITTLE	9	10	11	11	14	12
SENSE OF ACCOMPLISHMENT FROM JOB						
SATISFIED	61	71	65	51	71	75
NEUTRAL	14	13	12	11	6	5
DISSATISFIED	25	16	23	38	23	20
REENLISTMENT INTENTIONS						
YES OR PROBABLY YES	49	45	63	49	63	65
NO OR PROBABLY NO	51	55	36	51	10	9
WILL RETIRE	0	0	1	0	27	26

* The categories "FAIRLY WELL TO VERY WELL" and "EXCELLENT TO PERFECT" were reported as the single category "FAIRLY WELL TO PERFECTLY" in the 2000 report.

TABLE 43

COMPARISON OF REENLISTMENT FACTORS BY 4B0X1 TAFMS GROUPS –
PERCENT OF RESPONDENTS SELECTING EACH FACTOR AND
AVERAGE SCORE AMONG THOSE SELECTING EACH FACTOR

31 FACTORS LISTED IN ORDER OF APPEARANCE IN SURVEY Scale: 1 = Slight Influence; 2 = Moderate Influence; 3 = Strong Influence	1-48 MONTHS' TAFMS (N=87)		49-96 MONTHS' TAFMS (N=67)		97+ MONTHS' TAFMS (N=125)	
	Percent Selecting	Average	Percent Selecting	Average	Percent Selecting	Average
MILITARY LIFESTYLE	55	2.33	61	2.39	54	2.10
PAY AND ALLOWANCES	57	2.26	66	2.16	52	2.52
BONUS OR SPECIAL PAY	54	2.62	79	2.64	35	2.32
RETIREMENT BENEFITS	59	2.57	67	2.62	68	2.79
MILITARY-RELATED EDU & TRNG OPPORTUNITIES	67	2.47	57	2.42	46	2.19
OFF-DUTY EDU OR TRAINING OPPORTUNITIES	62	2.54	63	2.55	59	2.39
MEDICAL/ DENTAL CARE FOR AD MEMBER	72	2.63	70	2.64	51	2.62
MEDICAL/ DENTAL CARE FOR FAMILY MEMBERS	60	2.67	54	2.83	51	2.59
BASE HOUSING	31	1.93	24	1.94	17	2.24
BASE SERVICES	34	1.93	24	1.94	17	1.90
CHILDCARE NEEDS	15	2.54	30	2.55	14	2.56
SPOUSE'S CAREER	11	2.20	25	2.35	13	2.31
CIVILIAN JOB OPPORTUNITIES	14	2.67	21	2.21	14	2.56
EQUAL EMPLOYMENT OPPORTUNITIES	9	2.38	9	3.00	9	1.82
NUMBER OF PCS MOVES	18	2.06	22	2.27	20	2.04
LOCATION OF PRESENT ASSIGNMENT	26	2.43	34	2.30	30	2.35
NUMBER/DURATION OF TDYS OR DEPLOYMENTS	14	2.25	19	2.69	21	2.23
WORK SCHEDULE	39	2.18	33	2.23	28	2.20
ADDITIONAL DUTIES	11	2.00	33	1.91	11	1.93
JOB SECURITY	75	2.55	55	2.68	62	2.53
ENLISTED EVALUATION SYSTEM	7	1.83	16	2.36	9	2.36
PROMOTION OPPORTUNITIES	38	2.18	34	2.74	22	2.61
TRAINING/EXPERIENCE OF UNIT PERSONNEL	20	2.18	16	2.18	13	2.25
UNIT MANNING	5	1.50	13	1.56	10	2.17
UNIT RESOURCES	5	1.25	9	2.00	6	2.25
UNIT READINESS	11	1.70	6	2.50	7	2.33
RECOGNITION OF EFFORTS	29	2.32	18	2.58	20	2.40
ESPRIT DE CORPS/MORALE	24	2.43	27	2.61	27	2.59
LEADERSHIP OF IMMEDIATE SUPERVISOR	22	2.05	19	2.69	20	2.44
LEADERSHIP AT UNIT LEVEL	13	2.27	33	2.38	18	2.23
SENIOR AIR FORCE LEADERSHIP	9	1.88	10	2.57	9	2.45

TOP 5 REASONS FOR MEMBERS REENLISTING BY TAFMS GROUP

1-48 MONTHS' TAFMS (N=87)	49-96 MONTHS' TAFMS (N=67)	97+ MONTHS' TAFMS (N=125)
JOB SECURITY	BONUS OR SPECIAL PAY	RETIREMENT BENEFITS
MEDICAL OR DENTAL CARE FOR AD MEMBER	MEDICAL OR DENTAL CARE FOR AD MEMBER	JOB SECURITY

MILITARY-RELATED EDUCATION & TRAINING OPPORTUNITIES	RETIREMENT BENEFITS	OFF-DUTY EDUCATION OR TRAINING OPPORTUNITIES
OFF-DUTY EDUCATION OR TRAINING OPPORTUNITIES	PAY AND ALLOWANCES	MILITARY LIFESTYLE
MEDICAL OR DENTAL CARE FOR FAMILY MEMBERS	OFF-DUTY EDUCATION OR TRAINING OPPORTUNITIES	PAY AND ALLOWANCES

TABLE 44

COMPARISON OF SEPARATION FACTORS BY 4B0X1 TAFMS GROUPS –
PERCENT OF RESPONDENTS SELECTING EACH FACTOR AND
AVERAGE SCORE AMONG THOSE SELECTING EACH FACTOR

31 FACTORS LISTED IN ORDER OF APPEARANCE IN SURVEY Scale: 1 = Slight Influence; 2 = Moderate Influence; 3 = Strong Influence	1-48 MONTHS' TAFMS (N=90)		49-96 MONTHS' TAFMS (N=39)		97+ MONTHS' TAFMS (N=19)	
	Percent Selecting	Average	Percent Selecting	Average	Percent Selecting	Average
MILITARY LIFESTYLE	58	2.46	54	2.38	32	2.00
PAY AND ALLOWANCES	47	2.48	46	2.44	42	2.38
BONUS OR SPECIAL PAY	12	2.09	13	2.40	5	1.00
RETIREMENT BENEFITS	8	2.14	13	3.00	11	2.00
MILITARY-RELATED EDU & TRNG OPPORTUNITIES	16	1.79	15	1.50	21	1.50
OFF-DUTY EDU OR TRAINING OPPORTUNITIES	34	2.23	21	2.25	21	2.00
MEDICAL/ DENTAL CARE FOR AD MEMBER	11	1.60	18	1.71	11	1.50
MEDICAL/ DENTAL CARE FOR FAMILY MEMBERS	8	1.71	15	1.83	16	2.00
BASE HOUSING	7	1.83	10	2.50	11	2.50
BASE SERVICES	6	2.20	10	2.75	5	3.00
CHILDCARE NEEDS	10	2.33	15	2.67	11	1.50
SPOUSE'S CAREER	11	2.60	15	2.50	11	1.50
CIVILIAN JOB OPPORTUNITIES	44	2.47	23	2.89	53	2.60
EQUAL EMPLOYMENT OPPORTUNITIES	10	2.22	15	2.83	5	1.00
NUMBER OF PCS MOVES	20	2.22	15	2.50	26	2.60
LOCATION OF PRESENT ASSIGNMENT	42	2.50	26	2.10	26	2.20
NUMBER/DURATION OF TDYS OR DEPLOYMENTS	18	2.12	21	2.38	21	2.25
WORK SCHEDULE	8	2.43	21	2.50	26	2.40
ADDITIONAL DUTIES	27	2.33	18	2.43	42	1.75
JOB SECURITY	3	2.67	13	2.00	5	1.00
ENLISTED EVALUATION SYSTEM	14	2.46	18	2.43	21	2.25
PROMOTION OPPORTUNITIES	18	2.69	74	2.60	21	2.00
TRAINING/EXPERIENCE OF UNIT PERSONNEL	20	2.50	23	2.22	26	1.60
UNIT MANNING	23	2.14	21	2.62	42	2.38
UNIT RESOURCES	13	2.00	13	2.40	32	2.17
UNIT READINESS	9	2.12	10	3.00	16	2.00
RECOGNITION OF EFFORTS	37	2.33	46	2.59	37	2.57
ESPRIT DE CORPS/MORALE	40	2.47	49	2.58	42	2.12
LEADERSHIP OF IMMEDIATE SUPERVISOR	20	2.16	31	2.33	42	2.75
LEADERSHIP AT UNIT LEVEL	28	2.52	38	2.33	38	2.64
SENIOR AIR FORCE LEADERSHIP	20	2.61	33	2.31	32	2.33

TOP 5 REASONS FOR MEMBERS SEPARATING BY TAFMS GROUP

1-48 MONTHS' TAFMS (N=90)	49-96 MONTHS' TAFMS (N=39)	97+ MONTHS' TAFMS (N=19)
MILITARY LIFESTYLE	PROMOTION OPPORTUNITIES	CIVILIAN JOB OPPORTUNITIES
PAY AND ALLOWANCES	MILITARY LIFESTYLE	PAY AND ALLOWANCES
CIVILIAN JOB OPPORTUNITIES	ESPRIT DE CORPS/MORALE	ADDITIONAL DUTIES

LOCATION OF PRESENT ASSIGNMENT	PAY AND ALLOWANCES	UNIT MANNING
ESPRIT DE CORPS/MORALE	RECOGNITION OF EFFORTS	ESPRIT DE CORPS/MORALE